

BLM CALIFORNIA

Oil Spill Plan

CONTINGENCY

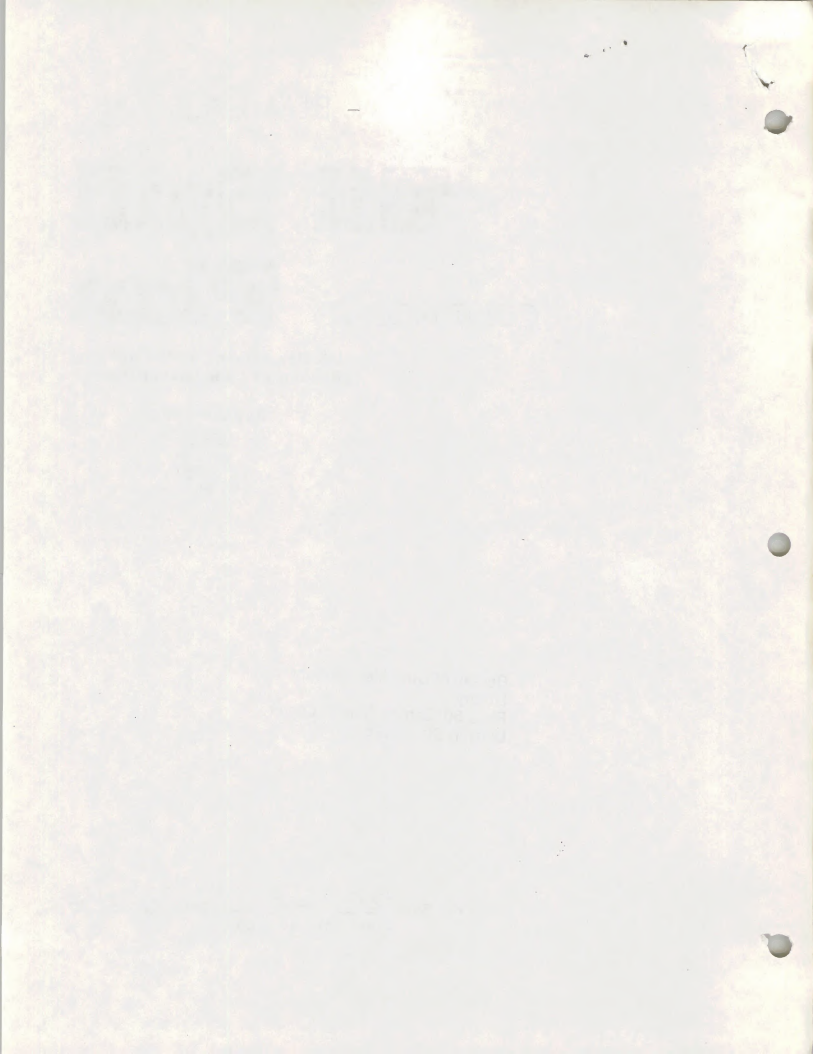
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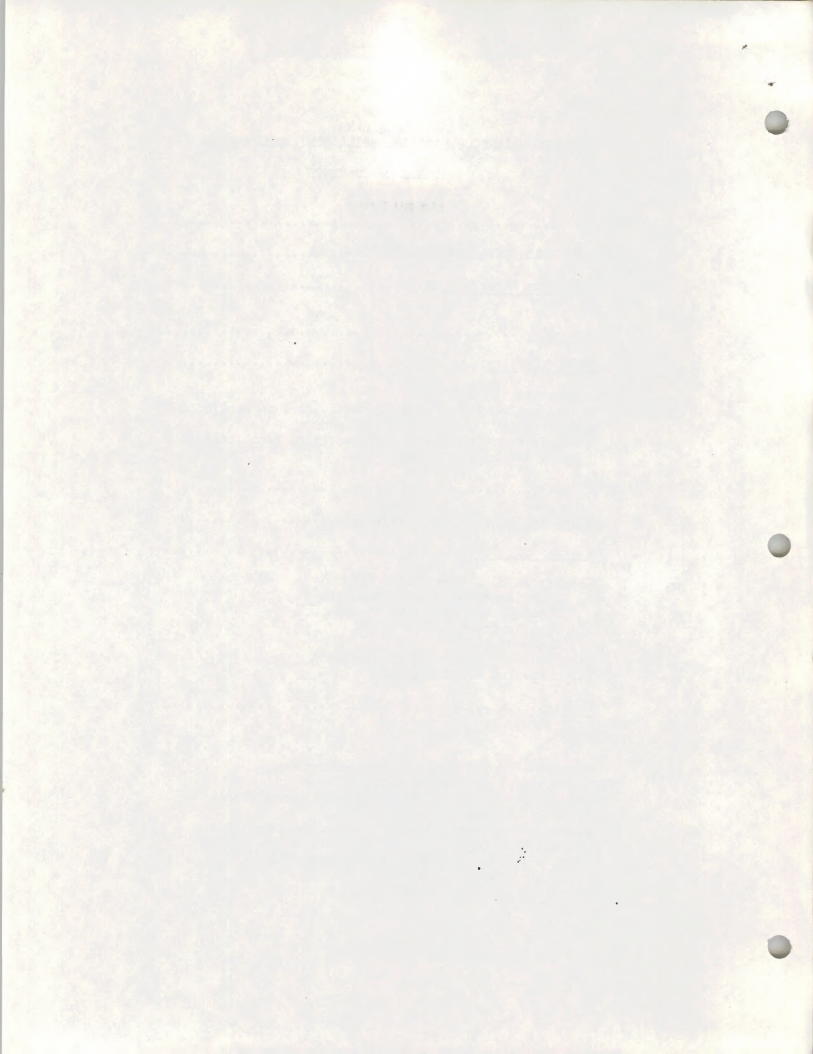
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CALIFORNIA BLM
OIL AND HAZARDOUS MATERIAL SPILL CONTINGENCY PLAN

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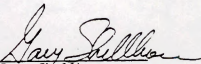
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BLM CALIFORNIA
OIL SPILL
CONTINGENCY PLAN

United States Department of the Interior
Bureau of Land Management
California State Office

Prepared by


Gary Spellhorn

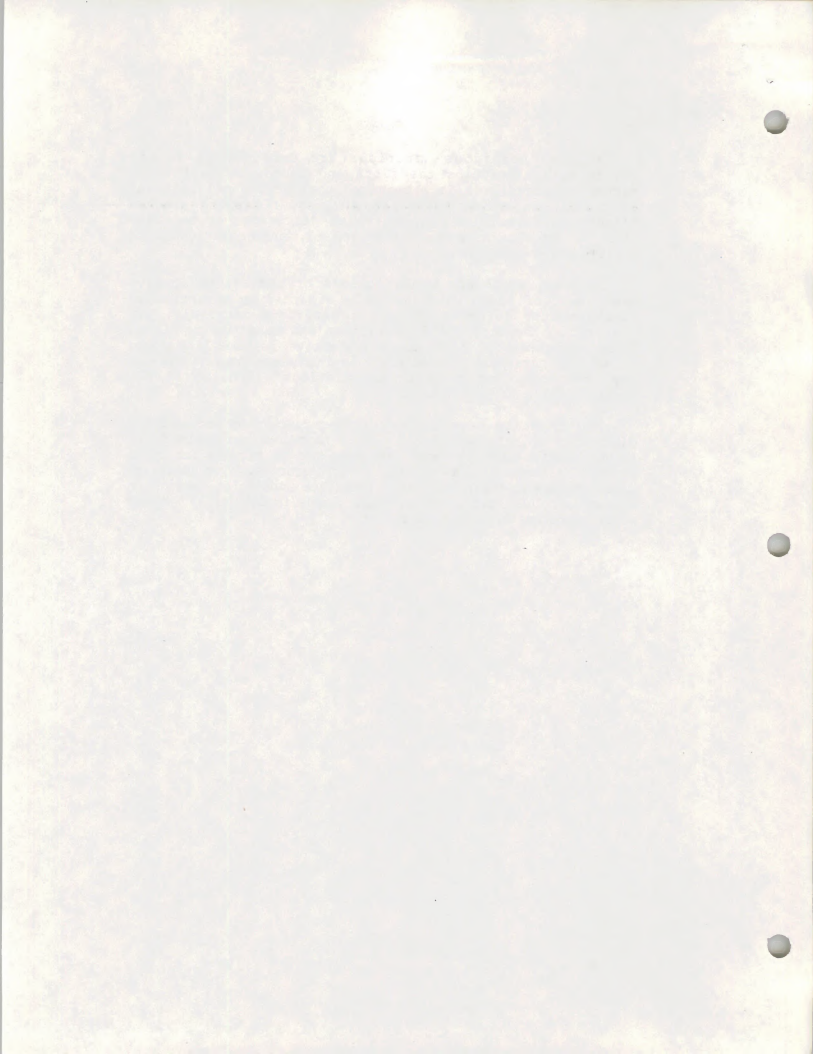


PREFACE

Oil and hazardous materials are detrimental to the environment, including the flora and fauna, as well as to water resources. It is recognized that accidental releases of oil or hazardous materials will occur despite precautionary measures. All uncontrolled discharges or releases will be contained, removed, disposed of, and/or mitigated to protect the environment.

"Federal agencies, whose actions or operations involve management of lands which could be affected by uncontrolled discharges or releases of oil or hazardous materials, are required to develop spill prevention and contingency plans. These agencies will incorporate preventive measures in regard to oil and hazardous materials spills into easements, rights-of-way, projects, and contract stipulations" (EPA, 36 FR 67, April 7, 1976; 33 CFR 209.131).

The intent of laws and regulations concerning uncontrolled discharges or releases of oil and/or hazardous materials is to prevent their entering water resources and to provide for rapid removal of these substances from water resources. The Bureau of Land Management (BLM) will take immediate appropriate action on all uncontrolled discharges on public lands in California whether water resources are involved or not.



CALIFORNIA OIL SPILL CONTINGENCY PLAN

This Contingency Plan is intended as an action plan and is directed toward providing BLM Districts in California a framework within which to respond to hazardous materials or oil spills on or threatening lands and resources administered by the BLM.

Hazardous Materials

A substance can be considered hazardous if it possesses sufficient potential to endanger life forms. Virtually every substance has the potential for presenting some danger to public health or welfare, depending upon the quantity of the substance discharged, and the time, location, and conditions of the discharge. The Environmental Protection Agency (EPA) has prepared a list of substances they consider hazardous (Federal Register, March 13, 1978, Part II, "Water Programs—Hazardous Substances," Appendix V).

Oil materials considered hazardous include oil or oil-base derivatives, acids, and caustic compounds which, because of the amount discharged and/or toxicity of material, would adversely affect the recognized beneficial uses made of the waters receiving, or which could receive, the material discharged. The most common hazardous materials we deal with on public lands include the following:

1. Asphalt-base
 - a. Road oils
 - b. Paving materials
2. Liquid fuels
 - a. Diesel
 - b. Gasoline
 - c. Petroleum gas
3. Lubricating grease oil
4. Pesticides
 - a. Herbicides
 - b. Insecticides
 - c. Fungicides
 - d. Rodenticides

Spills

A spill is defined as a discharge or release which (1) could reach, even though contained, perennial, intermittent, and ephemeral stream courses; or (2) may reach these stream courses in time because of soil, vegetation, and potential runoff conditions; and (3) will adversely affect public health or beneficial downstream uses. A discharge occurring in an ephemeral desert wash would be considered a spill, even though no water course was in immediate danger.

Spills are rated according to the degree of severity, as either minor, medium, or major (EPA, Region IX Contingency Plan Definitions, Appendix II):

Major Spill-- A spill of oil of more than 10,000 gallons in the inland waters inland of a line drawn across the ocean headlands, or more than 100,000 gallons in the coastal waters; or a spill of any material of any size of such nature and quantity that human health or welfare are substantially threatened;

Medium Spill-- A spill of oil of 1,001 gallons to 10,000 gallons on the inland waters inland of a line drawn across the ocean headlands, or 10,001 gallons to 100,000 gallons in the coastal waters; or a spill of any material of any size which poses a threat to the water quality, aquatic environment, or substantially threatens human health or welfare;

Minor Spill-- A spill of oil of less than 1,000 gallons in the inland waters inland of a line drawn across the ocean headlands, or less than 10,000 gallons in the coastal waters; or a spill of small quantities of other substances.

Spills that (1) occur in or endanger critical water areas (2) receive major coverage in the public press, (3) become the focus of an enforcement action, or (4) pose a threat to human health or welfare, should be classified as medium or major spills, depending upon the degree of impact.

Authority

The National Oil and Hazardous Substances Pollution Contingency Plan is the basis of required national procedures for response to spills of oil and hazardous materials. The Federal Water Pollution Control Act and the National Contingency Plan require preparation of regional, State, subregional, and local contingency plans for spills of oil or hazardous materials. The U.S. Coast Guard and EPA are responsible for preparation of regional plans.

Federal agencies whose actions or operations involve the handling, use or development of oil or hazardous materials are required to develop spill contingency plans (Executive Order 11507, February 5, 1970). The California BLM Oil Spill Contingency Plan is aimed at meeting these requirements and augmenting the EPA regional contingency plan (see Appendix 3).

Responsibility

The U.S. Coast Guard and EPA have overall responsibility to insure that spills of oil or hazardous materials are properly and adequately abated. All major spills and many other discharges will be handled by the U.S. Coast Guard or EPA. These agencies can and may delegate the authority for spill abatement to other agencies.

The on-scene coordinator (OCS) is the first Federal official to become involved with the abatement of an oil or hazardous material discharge/spill. The BLM California State Office (CSO) and District Offices shall each designate an on-scene coordinator. When the BLM-designated coordinator is the first Federal official involved at the scene of any discharge or spill, he shall take the lead responsibility with respect to notification, monitoring, containment, and cleanup of the spill and with respect to disposal of the oil or hazardous materials. When the BLM is notified or has knowledge of any discharge, release, or spill, the on-scene coordinator shall investigate the scene and take appropriate action.

California BLM OCSs

The California State Office spill coordinator is the Division of Resources Air and Water Quality Specialist. He/she shall review and update this contingency plan on an annual basis to insure correctness and technical adequacy. He/she shall also arrange the necessary training and workshops for District Office on-scene coordinators to enable them to adequately handle oil or hazardous materials spills response actions.

The State Office and District Office coordinators will cooperate with the appropriate State and Federal agencies in oil or hazardous materials spill abatement. They will implement the California BLM Oil Spill Contingency Plan.

The District Office on-scene coordinator shall direct

district-level spill response efforts and update the Oil Spill Contingency Plan as necessary. When necessary, the District Office coordinator shall develop a District spill contingency plan to augment the statewide plan to specifically address the concerns and needs of the District for spill mitigation and abatement.

The California State Office spill coordinator, through the State Office Compliance Specialist, will insure that preventive measures regarding oil and hazardous materials spills are incorporated in easement, right-of-way, lease, project, and contract stipulations authorized or issued by the BLM State Office. The District on-scene coordinator shall review all District actions, authorizations and contracts which involve the use or transport of oil or hazardous materials to insure that adequate spill prevention and mitigation measures are incorporated in the permitting document.

Discharges Resulting from BLM Activities on Public Lands

The BLM District Office, through the on-scene coordinator, will be responsible for reporting, containment, and cleanup of spills and for ultimate disposal of residuals and site restoration when such spills, discharges, or releases result from BLM actions or activities on the public lands. All costs incurred in such instances will be borne by the BLM. Emergency funds, authorized in BLM Manual 1634 and CSO Supplement 1-101 (Nov. 15, 1974), are to be used only for spills directly attributable to BLM actions. The District on-scene coordinator may make a verbal request for funds to the CSO spill coordinator for inventory, reporting, cleanup, and site restoration on public lands, if needed.

The CSO spill coordinator will work through and in conjunction with the State Office Division of Management Services to obtain emergency funds. When emergency contracting is necessary, it should be carried out through contractors on the EPA list of contractors (see Appendix 2). The CSO spill coordinator will work with the Management Services Contracting Officer and the district on-scene coordinator with assistance from the District Administrative Officer on emergency contracting procedures and to secure service contractors in the area.

Discharges by Others on Public Lands

The District Manager or on-scene coordinator will encourage the individual, corporation, agency, or legal entity causing the

spill/discharge to take appropriate action. The discharger must notify EPA of the accident, even though BLM has been notified. If the discharger cannot be readily identified or fails to take necessary action, the BLM on-scene coordinator will initiate implementation of the California BLM Oil Spill Contingency Plan.

The Federal on-scene coordinator provides assistance and guidance, as requested or necessary, to complete adequate spill mitigation. If the spill is affecting or could affect a water course which can be deemed navigable, the BLM on-scene coordinator can request, from the Environmental National Response Center, use of the National Pollution Revolving Fund to finance spill mitigation measures. The U.S. Coast Guard and EPA are the only agencies authorized to obtain funding from this source—their approval is required before any funds can be utilized. If the discharger is identified, the U. S. Coast Guard or EPA will take steps to recover costs incurred in spill mitigation covered by the National Pollution Revolving Fund through reimbursement or litigation. Generally the discharger will bear the cost of spill abatement.

The BLM on-scene coordinator will encourage the State or county agencies to take action and lead responsibility on spills occurring on highways maintained by those agencies and crossing public lands.

Discharges on Private Lands Threatening Facilities or Natural Resources on Public Lands

The BLM will report discharges on private lands threatening public lands to the EPA Emergency Response Coordinator and to the California Emergency Services Office. The EPA or California Emergency Services should provide or designate the on-scene coordinator.



SPILL REPORTING PROCEDURE

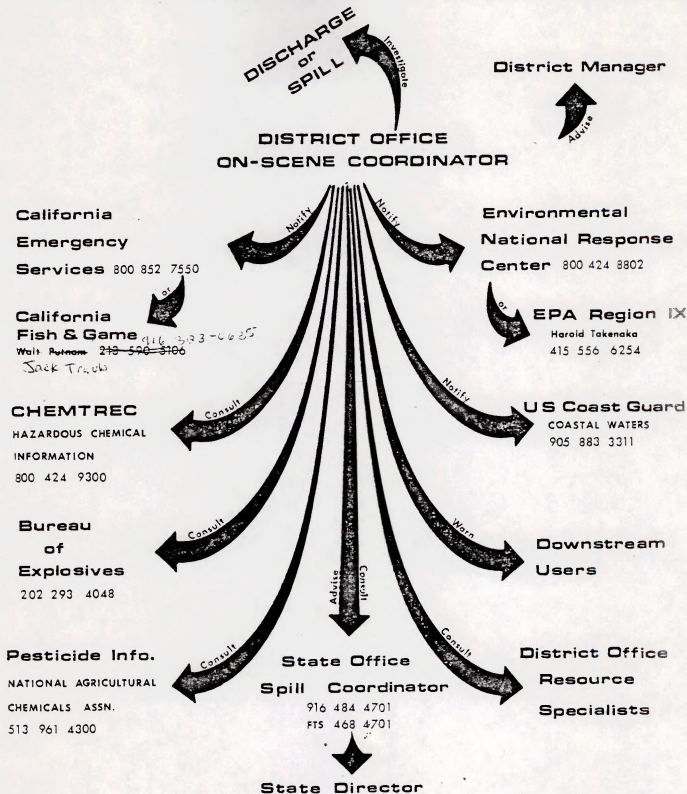
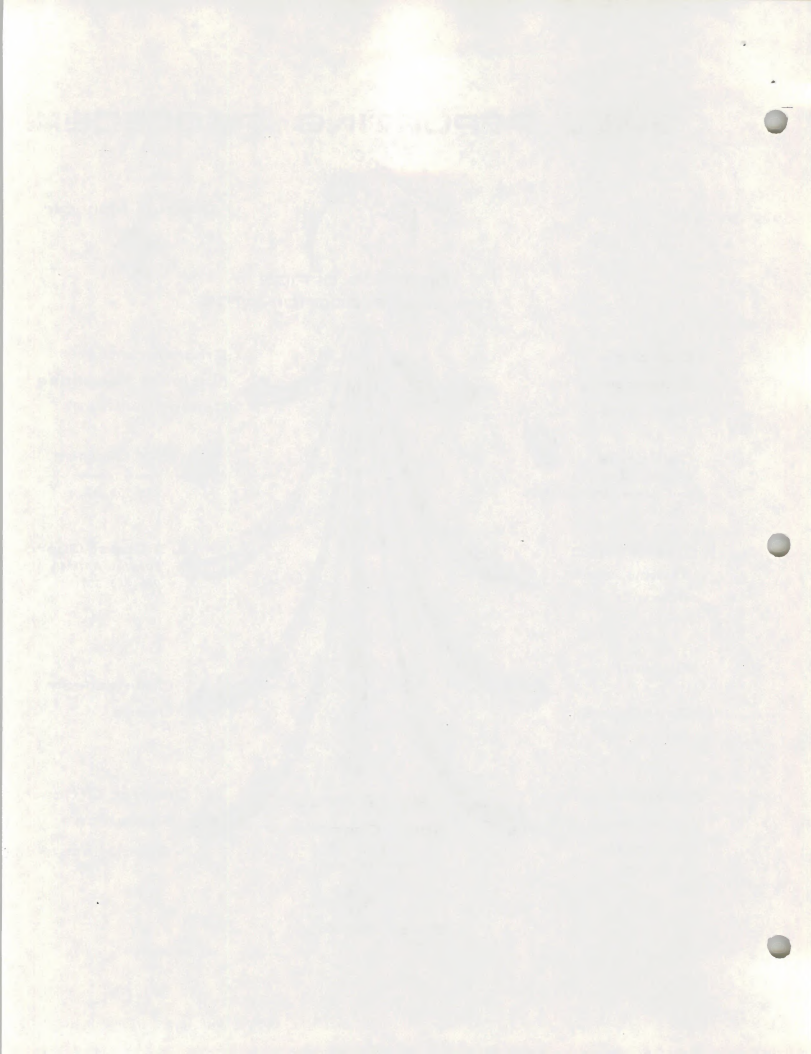


FIGURE 1



ACTION PLAN

Notification

When an oil or hazardous material spill is discovered by or reported to BLM, the notified District on-scene coordinator or his alternate will take control of the response action and document response efforts (see Appendix 7). The following procedure should be followed and documented:

1. Immediately identify the following:
 - a. Nature or type of hazardous substance (herbicide, oil, acid, etc.);
 - b. Quantity or rate of spill;
 - c. Location or origin of spill; and
 - d. Probable discharger or cause.
2. Ascertain what action or control measures, if any, have been taken to contain the spill.
3. Determine if the spill is the result of a BLM activity or BLM action (Temporary use permit, permit, or lease).
4. Estimate the distance to live water (include the names of drainages, streams, and rivers).
5. Determine if the spill is a health or safety hazard (contact discharger if known, or call CHEMTREC, (800) 424-9300).
6. Notify the Environmental National Response Center (800) 424-8802 (24 hours) and provide the above information concerning the spill. The U.S. Coast Guard or EPA will assess the spill information and, depending upon the magnitude or severity of the spill, may take the lead or may name the BLM as on-scene coordinator. If the District on-scene coordinator or CSO spill coordinator feels the magnitude of the spill is beyond the BLM expertise, the U.S. Coast Guard and/or EPA may be asked to provide the coordinator and on-site direction.

Generally, if a spill is not in or threatening live water it is not necessary to notify the Environmental National Response Center but instead directly notify the U.S. Coast Guard (for coastal watersheds) or the Region IX EPA (for inland watersheds) (see Appendix 1). If a spill is not in or threatening live water, the U.S. Coast Guard or EPA may not become directly involved and may, instead, designate the BLM as on-scene coordinator if the spill is on public lands.

7. Notify the California Emergency Service Center (800) 852-7550. If the spill is on State land or private lands, the California State Agency Coordinator (SAC) will determine and provide the coordinator. The California Department of Fish and Game generally is the lead State agency in spill abatement. During working hours, Walt Putnam, California Department of Fish and Game (213) 590-5106, will provide assistance for spill containment, clean-up, removal, and site restoration.

8. The CSO coordinator should be contacted to provide technical assistance and emergency funding, and to keep the State Director advised of the status of the spill.

9. It may be necessary to alert local contacts if immediate or potential hazard to downstream beneficial uses exists.

Courses of Action

To most field personnel, discharge of oil seem to pose no imminent threat to personal safety, but the characteristics of these and other hazardous substances range from mild to deadly and do pose a threat to natural resources and the public health. As such, they must be dealt with as an emergency situation. Therefore, a discharge area should be approached with extreme caution until it is known that the substance involved has little or no potential hazard. No physical action shall be attempted to contain or clean up a spill until it is determined safe to do so. The on-scene coordinator should determine the nature of the spill substance from the discharger, carrier, or owner involved in transport of the substance. To assess the dangers involved in handling or dealing with the spill substance, if the discharger does not know or cannot be located, the on-scene coordinator should call CHEMTREC or National Agricultural Chemicals Association (see Figure 1) for the necessary information on handling the spilled substance. Personal safety is of utmost importance (see "Personal Safety During Hazardous Material Spill Operations", Appendix 6).

Discharges of Oil or Hazardous Materials Resulting
from BLM Activities

The on-scene coordinator will immediately investigate the incident and: (1) evaluate the magnitude and severity of the discharge; (2) initiate containment procedures; (3) determine feasibility of removal; and, (4) assess the effectiveness of removal actions. He shall enlist the assistance of any necessary BLM specialists or technicians in the assessment of the problem and shall direct the containment, cleanup, and restoration of the lands involved or affected by the spill actions.

Containment and Countermeasures

Containment actions should be initiated as soon as possible after the discovery and notification of a spill. These actions may include the use of tractors, loaders, graders, or shovels to build earthen dams, dikes, or levees to halt or slow the spread of the substance. Sandbags or bales of straw may also be used. Soil, sand, sawdust, or sorbent compounds (Zorb-all, chlorine, lime) are commonly used field tools to halt or slow the spread of a spill.

Where live water is involved, the pollutant should be diverted or restrained with temporary earthen, straw, canvas, or plastic sheet dams and sorbent materials applied. Do not overlook the possibility of controlling water outflow from upstream impoundments. The watershed expertise of the hydrologist and the earth construction techniques of the engineers can be most helpful at this point. The most effective technique is good common sense; utilize all available resources wisely.

Heavy equipment should be used cautiously in drainages or streams. Oil mixed with loose soil may be out of sight, but it can mix with surface soils and then enter surface water as runoff. An earthen dike constructed below the spill will avoid this problem by containing the runoff and allowing the oil to be vacuumed from the water contained by the dike.

Cleanup, Abatement, and Disposal

Actions should be taken to recover the spilled substance from the water or affected land areas and to monitor activities to determine the effectiveness of removal actions. Methods and equipment that could be used include: (1) machinery or hand tools for removal of contaminated soil; (2) sorbents, skimmers, and other devices for collection of floating pollutants; (3) vacuum

trucks and dredges for removal of confined or sunken pollutants, (4) reeration or similiar methods to minimize or abate damage resulting from dissolved, suspended, or emulsified pollutants, or (5) spraying with water or appropriate chemicals to minimize volatilization of substances. Chemicals may not be used on water to confine or cleanup spills unless permission is first obtained from the EPA.

Substances and contaminated materials must be disposed of at a Class 1 landfill, such as the County of San Diego's Otay Disposal Site or the BKK Company Class 1 Public Disposal in West Covina (see disposal site list, Appendix IV). Contaminated materials must be transported in adequate containers or securely covered if uncontained. If the material is deemed to be hazardous wastes, transporters must comply with the standards set forth in "Standards Applicable to Transporters of Hazardous Wastes", (EPA April 28, 1978) (see Appendix 7).

The District on-scene coordinator should order supplies, equipment, and personnel through the District Manager. Clearance for commitment of emergency 4630 funds by the on-scene coordinator requires CSO confirmation. Approval for use of the National Pollution Revolving Funds must come through the U.S. Coast Guard or EPA. Assistance may be needed from the CSO spill coordinator in obtaining approval for these revolving funds.

The oil cleanup services, equipment, and materials inventory list (see Appendix 2) is a guide to available contractors that may be used. The U.S. Coast Guard maintains a computer search system for contracting services and may be utilized by calling the Coast Guard (see Appendix 1). Many local businesses that can provide necessary services should be listed at the District Office. The closer the service or equipment to the spill site, the quicker the response time.

Site Restoration

Often during spill containment and removal, temporary facilities are constructed and natural regimes are altered or destroyed. Restoration of disturbed lands may be necessary. Temporary dams shall be removed and natural channel conditions restored. Where alteration of drainage patterns has occurred, these areas will be returned to natural conditions. Sorbent materials will be removed. Areas from which vegetation has been removed and where the natural surface contour has been altered shall be reseeded and the original surface contour restored to the extent possible. Reseeding will be done to return vegetation

to the pre-spill conditions or to a vegetative regime compatible with management objectives for the area. Restoration costs shall be borne by the responsible activity or by the discharger.

Documentation

The on-scene coordinator will keep detailed records of actions taken by the BLM concerning oil or hazardous materials discharges/spills. This documentation is essential for funding reimbursement, support in potential legal actions, and evaluation of response to spills. The staff specialist's assessment of resource damage and documentation of containment, cleanup and disposal phases is required for preparation of the spill report (Appendix 8) which must be sent to the EPA upon termination of spill abatement actions.

Discharges of Oil or Hazardous Materials by Others on BLM-Administered Lands.

The on-scene coordinator, after receiving a report of a spill or release of oil or hazardous materials, must make every effort to ascertain the responsible entity whether it is an individual, corporation, or agency. He shall make them aware of their responsibility for notification of the EPA and/or U.S. Coast Guard, for containment and cleanup. In the event the responsible entity does not act promptly or take proper action, or cannot be located, the on-scene coordinator shall take the necessary action to notify the EPA and/or the U.S. Coast Guard, and to contain the spill and dispose of hazardous materials, restore the site, and provide financing for dealing with the discharge/spill. The course of action to be taken is the same as described in the preceding section ("Discharges Resulting from BLM Activities"). Accurate documentation is essential and properly completed reports are necessary to assure reimbursement by the responsible party after the fact.

Discharges of Oil or Hazardous Materials on Private Lands Threatening Public Lands.

The on-scene coordinator shall monitor the extent of the spill and actions taken in response to such spills to insure their containment to avoid impacts on public lands. If the spill threatens natural resources or facilities on public lands, the on-scene coordinator shall notify the EPA and State of California. He may initiate action for containment to protect those natural resources or facilities and continue abatement procedures until the responsible entity takes over containment procedures or a State of California agency coordinator arrives on scene.

Reports

The BLM on-scene coordinator shall prepare all reports necessary to adequately document all spill response actions. The initial field report (EPA IX FORM 333) (Appendix 8) must be completed and sent to the EPA Region IX office. If more documentation or explanation is justified, the on-scene coordinator should attach additional comments to Form 333. He should supply copies of these reports to the California State Director through the CSO spill coordinator. All reports shall be comprehensive, complete, yet brief.

APPENDIX 1.

Environmental Protection Agency Region IX
215 Fremont St (415) 556-6254
San Francisco, CA 94105 (24 hours)
FTS 556-6254

Harold Takenaka - Emergency Response Coordinator
Dave Minard - Team
Ronald Clawson - Team FTS 556-7858
Bill Lewis - Team
Bob Mandel - Team

Environmental National Response Center
(800) 424-8802
(24 hours)

California Emergency Services Office
(800) 852-7550
(24 hours)

California Department of Fish and Game
Walt Putnam (213) 590-5106

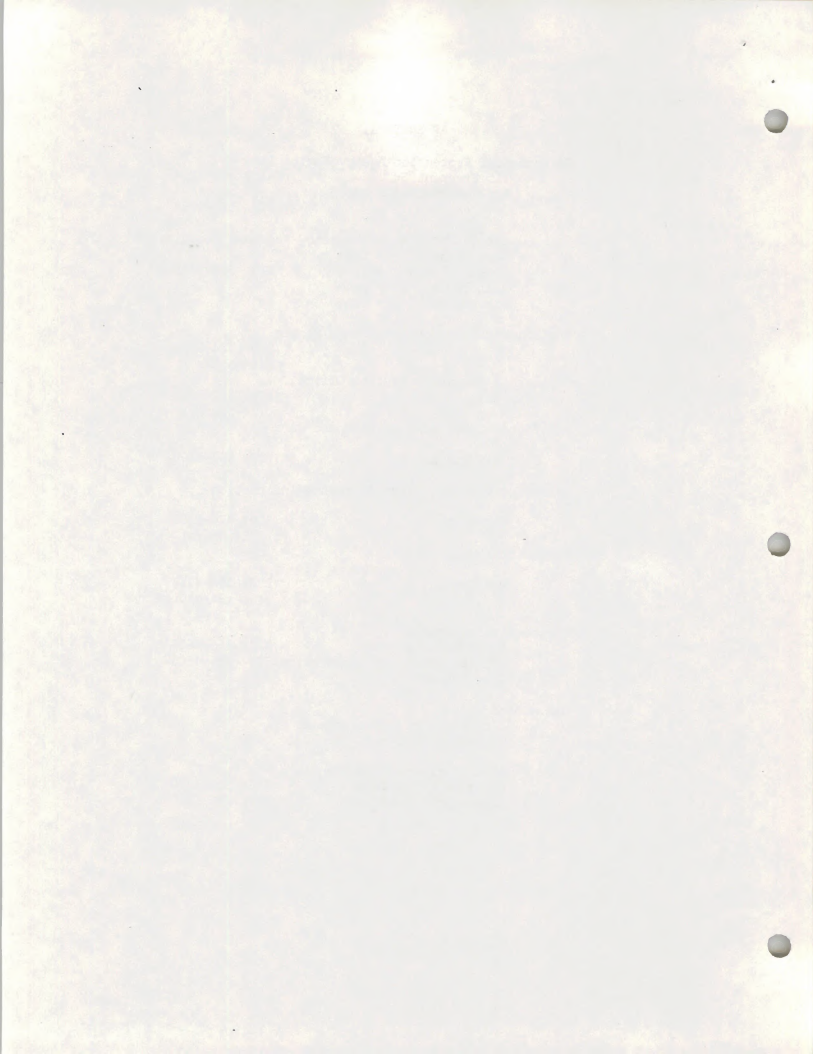
Hazardous Chemical Cargo Emergency Information
Chemtrec (800) 424-9300
(24 hours)

Bureau of Explosives
Washington, D.C. (202) 293-4048
(24 hours)

Radioactive Materials
Department of Energy (415) 556-4606
Nuclear Regulatory Commission FTS 556-4606
Dave Duncan

U.S. Coast Guard
11th District - Los Angeles
Commander Busby

12th District - San Francisco
Commander Glen Dazey (415) 556-1380
Lieutenant Dave Caron FTS 556-1380



CALIFORNIA BLM ON-SCENE COORDINATOR

Lois Payne (916) 484-4701
FTS 468-4701

Hunter Weiler (916) 484-4886
FTS 468-4886

California State Office
2800 Cottage Way
Sacramento, CA 95825

H. Edward Lynch (805) 861-4191
FTS 984-1191

Gordon King Alternate

Bakersfield District Office
U.S. Federal Bldg. Rm. 311
800 Truxtum Ave.
Bakersfield, CA 93314

Perry Francis (916) 985-4474
FTS 448-3440

Tom Parker Alternate

Folsom District Office
63 Natoma Street
Folsom, CA 95630

Robert Walker (916) 246-5325
FTS 461-5325

Bruce Daughton Alternate

Redding District Office
355 Hemsted Dr.
Redding, CA 96001

Brain Booher

(714) 787-1462
FTS 796-1681

Alternate

Riverside District Office
1695 Spruce St.
Riverside, CA 92507

Paul Zwerman

(916) 257-5385

Tim Carroll

Alternate

Susanville District Office
705 Hall St.
P.O. Box 1090
Susanville, CA 96130

Stan McKee

(707) 462-3873

District Civil Engineer

Alternate

Ukiah District Office
P.O. Box 940
55 Leslie St.
Ukiah, CA 95482

APPENDIX 2
Clean Up Contractors Guide

Commercial contractors which may be utilized for oil or hazardous material containment and clean up are numerous. Many local businesses may be able to provide the services needed. Some contractors who will engage in oil or hazardous material spills clean up are listed below:

California

Browning-Ferris Industries (707) 745-2296
675 East "H" Street
Benecia, CA

Pacific Pollution Control (415) 986-1662
Watergate Tower
1900 Powell Street
Emeryville, CA 94608]

Wm. H. Hutchison & Sons (415) 832-6218
1115 Embarcadero 24 Hours
Oakland, CA 94606

Industrial Tank, Inc. (415) 228-5100
210 Berrellesa Street
Martinez, CA

Murphy Pacific Corporation (415) 653-1717
4300 Eastshore Highway
Emeryville, CA

Browning-Ferris Industries (213) 549-2480
P.O. Box 44
Wilmington, CA

Crosby and Overton, Inc. (508) 432-5447
1620 West 16th Street
Long Beach, CA

Chancellor and Ogden, Inc. (213) 432-8461
3031 East First Street
Wilmington, CA

Pepper Tank Cleaning (714) 474-6551
Service, Inc.
San Diego, CA

H&H Ship Service Company (415) 982-4835
Foot of Channel Street
San Francisco, CA

Wm. H. Hutchinson & Sons, Inc. (213) 830-1720
217 Lagoon Avenue
N. Wilmington, CA

National

Duane Marine Corp. (212) 984-5566
24 Hours

Western Environmental (503) 283-5600
Service (503) 285-9111
24 Hours

Industrial Cleanup Cooperative

Clean Bay, Inc. (415) 685-2800
2280 Diamond Blvd. 24 Hours
Room 220
Concord, CA

Clean Seas, Inc. (805) 963-3488
18 Marine Center Building 24 Hours
Santa Barbara, CA

Petroleum Industry Coastal (213) 435-5306 (work hours)
Emergency Cooperative (PICE) (312) 433-8346 (24 hours)
55 East Ocean Boulevard,
Suite 510
Long Beach, CA 90802

Humbolt Bay Oil Spill (707) 443-7367
Cooperative
P.O.Box 1008
Eureka, CA

Vacuum Trucks

Roto-Rooter (707) 445-0571
P.O. Box 1326
6028 Avalon Drive
Eureka, CA

- (1) Septic tank pumper - 1,200 gals. (vacuum)
- (2) 1/3 h/p elec. driven sump pumps
- (2) Roto-Rooter equipment

Roto-Rooter (24 Hours) (707) 445-0571
Eureka, CA

- (2) Vans
- (1) Septic Pumper Truck

Wyckoff Plumbing & Septic (707) 725-4474
Tank Service
(24 Hours)
2035 Main Street
Fortuna, Ca

- (3) 1/2 Ton Trucks
- (1) Septic Tank Truck - 1,400 gal.
- (1) 3-yard Dump Truck
- (1) Trailer for Back Hoe
- (1) Crawler/back Hoe

Ureka & Peterson's Septic (707) 442-1308
Tank Service
Humboldt County, CA

- (1) Pumper Truck

Don's Septic Tank Service (702) 825-6676
510 E. Peckham Lane
Reno, NV

- (1) Vacuum Truck - 1,200 gal.

Sani-Hut Co. (702) 323-6720
Reno, NV

- (2) Vacuum Trucks - 1,200

Washoe Septic tands Service (702) 359-6206
870 Jensen
Reno, NV

- (1) Vacuum Truck - 1,900

B&E Sanitation (602) 782-4428
3351 West Columbia Avenue
Yuma, AZ

- (1) Vacuum Truck

Mayberry Sanitation Service (602) 783-4666
2340 West 24th Street
Yuma, AZ

- (3) Vacuum Trucks
- (1) Backhoe
- (2) Portable pumps

Roto-Rooter (707) 485-7116
2300 Road K (707) 485-8150
Redwood Valley, CA
(near Ukiah)

- (1) Septic Pump Tank Truck
- (3) Roto-Rooter Machines small/large
- (1) Van

George Watkins, Septic Tank (707) 964-5138
24451 Highway 1 North
Ft. Bragg, CA

- (2) 10 Yd. Trucks
- (1) 6 Yd. Truck
- (2) Back Hoe digger
- (1) Bull dozer
- (3) Loaders
- (1) Grader
- (1) Scraper

Roto-Rooter Sewer Services (916) 482-1400
5017 Robertson Avenue
Carmichael, CA

- (6) Vans
- (1) Pump Truck - 2,800 gals
- (1) Main Liner
- (1) Flusher Truck

John N. Bohannon (916) 363-2275
6100 Hedge Avenue
Sacramento, CA

- (2) Case 580 Backhoe
- (1) Dump Truck
- (1) Pump Truck
- (1) Boom Truck
- (5) Pickup Truck
- (1) Van
- (3) Flat Racks
- (1) Drill Rig (70 ft. depth)

Ike's Septic Service (209) 464-5276
 (7 days a week)
 4244 Marfargoa Drive
 Stockton, CA

- (1) Pump Truck
- (1) Back Hoe

Industrial Tank, Inc. (415) 228-5100
 210 Berrellesa Street
 Martinez, CA

Roto-Rooter (415) 341-9331
 Mountain View, CA (415) 583-0778
 San Bruno, CA (415) 369-5652

- (2) Vacuum Pump Trucks
- (1) Hydraulic Flushing Machine

Roto-Rooter (408) 372-8303
 1184 H. Forest Avenue
 Pacific Grove (Monterey), CA

- (1) Vacuum Pump Trucks
- (5) Service Trucks (panel)
- (1) Main Liners (trailer)

Roto-Rooter (408) 422-0055
 591 Brunken Avenue
 Salinas, CA

- (2) Vacuum Pump Trucks
- (1) Van
- (1) Rodding Machine

Maggiore Brothers (408) 724-1338
 595 Airport Boulevard
 Watsonville, CA

- (2) Dump Trucks
- (3) Vacuum Trucks
- (1) Back Hoe Drilling Equipment

Crosby & Overton Inc. (213) 432-5447
 (24 Hours) (213) 436-9723
 1620 West 16th
 Long Beach, CA

Atlor Cesspool Service (213) 326-0418
 1210 W. 190th Street
 Gardena, CA

- (2) Vacuum Trucks
- (1) Backhoe
- (1) Drill rig
- (2) Dump Trucks
- (1) Pickup Truck

Alameda Industrial (213) 428-5853
 Pumping Company (213) 558-3201
 2339 Curry
 Long Beach, CA

- (2) vacuum trucks
- (1) waste oil removal truck
- (1) pickup truck

Gasey's Septic Tank Service (714) 466-0581
 9020 Memory Lane
 Spring Valley, CA

Morrison, Howard G. (714) 417-2195
 Cesspools & Septic
 Tanks
 2325 Sweetwater Road
 National City, CA

- (1) vacuum pump truck
- (1) pickup truck
- (1) flat bed truck
- (1) dump truck

Bill's Septic Tank Pumping (602) 669-2961
 P.O. Box 327
 Parker, AZ

- (1) vacuum truck - 700 gal.

Jack Ward Septic Tank Company(602) 758-2874
1780 Mojave Highway
Bullhead, AZ

- (3) mixer trucks - 45,000 lbs.
- (2) large dump trucks - 45,000 lbs
- (1) small dump truck - 26,000 lbs.
- (2) septic tanker pump - 20,000 lbs.
- (2) company pickups - 8,000 lbs/ea.
- (1) boom truck - 14,000 lbs.
- (2) loaders
- (1) backhoe
- (1) motor grater
- (1) D8 caterpillar

Ace Septic Tank & Rooter Service
3391 Highway 50 East (702) 882-1577
Carson City, NV (702) 825-1595

- (2) vacuum trucks - 2,000 gal.
- (2) vacuum trucks - 1,500 gal.
- (2) backhoe/skiploader

Ace Septic Tank & Rooter Service
3391 Highway 50 East (702) 882-2301
Carson City, Nevada

Don's Septic Tank Service (702) 323-8676
510 East Pecklam Lane
Reno, Nevada

Dixon Water Septic Tank Service
209 Corbett (702) 882-1577
Carson City, Nevada

Roto-Rooter (702) 588-2226
Tahoe Area
Carson City, NV (702) 882-3619

Washoe Septic Tank Service (702) 323-0595
4275 Rewena Way
Reno, NV

Pumps

Rex E. Anderson Co. - Water Wells
10303 Channel Road (714) 443-3916
Lakeside, CA (near San Diego)

Pepper Tank Cleaning Service Inc.
2000 McKinley (714) 474-6551
National City, CA
(near San Diego)

Jensen Water Pumps (702) 329-1741
Record Supply Co.
300 Valley Road
Reno, NV

- (8) 2" Self Priming gasoline powered
- (8) 1 1/2 2 Self Priming gasoline powered

Also electric pumps of various sizes, hoses
and couplings to fit.

Peerless Pumps (702) 358-6715
Valley Pump Company
575 South 16th Street
Carson City, NV

Tonnesen Distributing Co. (702) 883-1194
5551 Highway 50 East
Carson City, NV

Burroughs of Nevada (702) 825-4422
10300 S. Virginia St.
Reno, NV

Richwell Drilling & Pump (707) 839-1087
1251 Railroad Drive (707) 839-3303 (evenings)
McKinleyville, CA (near Arcata)

- (1) Drainer pump 1/2 h/p
- (1) Sewer Lift Pump 1/2 h/p

Larry's Water Service (707) 725-3488
381 Palmer Blvd. (707) 764-3524
Fortuna, CA

- (1) Submersible Pump 3/4 h/p elec/driven
- (2) Contractor pumps 1 to 5 h/p
gas driven

Murray Well Drilling (707) 964-3126
2241 Sherwood Road
Fort Bragg, CA

Peterson, Drilling & Pump Inc(707) 545-0246
5434 Old Redwood Highway
Santa Rosa, CA

Aba Daba Rents (916) 487-8641
1547 Fulton Avenue
Sacramento, CA

(15) Centrifugal gas powered pumps
1 1/2 - 2" - 3"

(10) 3" Diaphragm pumps for heavy
liquids

(10) Submersible pumps elec. driven
self/priming 1" capacity

Coker Pumps
1009 22nd Street
Sacramento, CA

Contact Oakland Office for (415) 444-3731
Sacramento Area

Commercial contractor, can
handle cleanup operations from
large volume of equipment in stock.

Sta-Rite Pumps (916) 488-7801
2521 Tower Avenue
Sacramento, CA

(3) 3 1/2 h/p gas driven self priming
contractor pumps
Large stock of 1/2 & 1/3 h/p sump
pumps.

Irrigation Systems Inc. (209) 599-2134
Highway 99 and Jacktone Road
Behind Jimco Truck Stop
Ripon, CA (near Stockton)

(3) Centrifugal pumps (2) diesel (1) gas
100 h/p 40 h/p 60 h/p
with hoses

(10) Small contractor pumps
1/4 to 3 h/p

(3) Centrifugal P T O

University Pumps
1136 Broadway
Stockton, CA

(209) 464-9839

(5 to 10) Contractors pumps
3 to 10 gas driven
self priming

San Joaquin Pump Company
500 East Kettleman Lane
Lodi, CA (near Stockton)

(209) 369-0471

(209) 369-8471

(2) Small contractors pumps
1 1/2" diameter 2 1/4 h/p
engine self priming

Hamblin Drilling Co. (State-wide Service)
470 Cloverdale Avenue

(415) 682-6883

Concord, CA

(415) 682-8174 (evenings)

Equipment for sewer and manhole
drilling only.

Geo. M. Philpot
115 Harbor Way
South San Francisco, CA

(415) 589-1010

2" to 10 " diesel and gas
driven centrifugal pumps and hoses (large supply)

Magglara Bros.
595 Airport Blvd.
Watsonville, Ca

(408) 724-1338

(408) 842-3409 (home)

- (2) Contractor pumps 2 h/p
- (20) Submersible 1/3 to 15 h/p pumps
- (2) Centrifugal pumps, elect. 2"
- (1) Gas driven booster pump
5 h/p engine driven, self prime
- (3) Vacuum water pump trucks with
drilling machines 1,750 - 1,800 -
1,000 gals. capacity.

Pumps can be made from specification
to adapt to necessary condition.

Maggiarra Bros. (408) 724-1338
595 Airport Blvd. (408) 842-3409 (home)
Watsonville, CA

- (2) Contractor pumps 2 h/p
- (20) Submersible 1/3 to 15 h/p pumps
- (2) Centrifugal pumps, elect. 2"
- (1) Gas driven booster pump
5 h/p engine driven, self prime
- (3) Vacuum water pump trucks with
drilling machines 1,750 - 1,800 -
1,000 gals. capacity.

Pumps can be made from specification
to adapt to necessary condition.

Doutherty Pump & Drilling (408) 663-3562
2108 San Miguel Canyon Road
Salinas, CA

- (2) Contractors pumps, gas/driven
5 h/p
- (5) Submersible pumps, gas/driven
1/2 to 3 h/p
- (1) Centrifugal 1 h/p
- (1) 220 Generator

Cal Coast Acidizing Service (805) 937-3955
1403 Stubblefield Road (805) 937-3871
Santa Maria, CA
(near San Luis Obispo)

- (3) 471 GMC Diesel 4 by 5"
centrifugal, oil field
pumps, anchored on skids.

W.H. Hutchinson & Sons Inc. (213) 830-1720
P.O. Box 1256
217 N. Lagoon Avenue
Wilmington, CA 90744



HEAVY EQUIPMENT

A.H. & S. Constuction (213) 422-3626
Company (213) 426-7051
2439 Cerritos Ave.
Long Beach, CA

- (3) A frame trucks
- (2) Dump trucks
- (3) Backhoes
- (2) Skip Loaders
- (8) Pickup trucks
- (2) Welding Rig trucks
- (1) Tool truck

Ace Demo & Excavating Inc. (714) 449-2191
703 Bradley Avenue
El Cajon, CA

Arrow Construction Company of (602) 782-4381
Arizona, Inc.
1301 West Tenth Street
Yuma, AZ

- (4) D-8 Cats
- (1) Cat Scraper
- (2) 12 E Blades (Graders)
- (10) Dump trucks (5 to 22 yards)
- (6) Front end loaders
- (10) Pickup
- (3) Water trucks
- (1) Crane (Lorraine) 20 tons

Tanner Paving & Materials Co. (602) 782-9267
265 West 13th Street
Yuma, AZ

- (4) Blades
- (8) Rollers
- (3) Loaders 175A Michigan,
988 Cat, 4 yd. Terrick
- (4) Water trucks
- (4) Tractors (1) backhoe

Jerry Hanes (602) 753-3821
1025 Lydia Drive
Kingman, AZ

- (1) D7C Cat, bulldozer
attached
- (1) Air Trac Drill rig.
- (2) Small Air compressor & Jack Hammers
- (2) Dump trucks
- (1) Loaders

Clifford Chrauser and (602) 855-2529
Son Excavating Inc.
P.O. Box 54
25 Torrita Lane
Lake Havasu City, AZ

- (1) W 26 Loader
- (1) 780 C backhoe
- (1) 680 C backhoe
- (1) 580 Utility truck
- (1) Pickup truck

Mojave Trencher (602) 855- 2541
82 Lake Havasu Drive
Lake Havasu City, AZ

- (1) Backhoe
- (1) Dump truck
- (1) Trencher

Teichert Construction Engineering Contractors
8811 Kiefer Blvd. (916) 484-3311
Sacramento, CA

Fully equipped for paving, grading
underground & highway construction.

Stanfield & Moody (209) 835-1946
1000 East Eleventh Street
Tracy, CA

- (4) Cat motor graders
- (4) Dump trucks - 10 wheeler
- (10) Pickup truck
- (2) Water trucks
- (1) Trencher
- (1) Compactor
- (3) John Deer Paddlewheel scrapers
- (1) Cat 977 loader - on tracks
- (2) Backhoes

Martin Bros. Inc.
2548 Herndon Avenue
Concord, CA

(415) 685-7311

- (6) Dump trucks, 3 axles
- (6) Semi-dump trucks axles
- (6) 10 wheeler dump trucks
- (2) Backhoe
- (2) Compactors
- (3) Trenches
- (2) Loaders (Track type)
- (5) Loaders (Rubber tires)
- (4) Water trucks
- (25) Pickup Trucks
- (4) Paddlewheel scrapers
- (6) Blades - Cat
- (5) Scrapers
- (6) Push Cat dozers

Bay Cities Paving & Grading Inc.
5124 Huntington Avenue
Richmond, CA

(415) 524-7611

(415) 525-2452

- (5) 977 Cat Loaders
- (1) 955 Cat Loaders
- (1) 980 Rubber Tire Loader
- (1) 950 Rubber tire loader
- (1) 933 Loader (Track)
- (2) Water trucks
- (5) Semi-dump truck
- (7) 10 Wheelers
- (1) Bottom Dump
- (2) Motor Graders
- (3) Scrapers
- (1) D6 Dozers
- (2) D8 Dozers
- (12) Pickup trucks
- (1) Crane 45 gon
- (2) Transports
- (2) Hopta 900 Backhoes
- (1) Hopta 550 Backhoes
- (2) Case Backhoes with loaders
- (2) AC Backhoes with loaders
- (1) Paddle Wheeler scraper
- 631 John Deer

Flora Crane Service Inc. (415) 285-2500
250 Mendell
San Francisco, CA

- (2) hopts
- (3) Cats
- (1) Cat grader
- (2) dozer Cats
- (1) Compressor
- (3) Peterbuilt Dump trucks
- (1) Northwest Crane
- (3) Rollers
- (2) Flat beds
- (2) Fork lifts
- (1) Bear cats
- (1) Water trucks

Pacific Excavators (415) 524-3736
725 Cleveland Avenue
Albany, CA

- (1) D9 Cat
- (4) D8 Cats
- (1) D6 Cat
- (3) Motor Graders
- (11) Cat scrapers
- (1) 900 Hopta (backhoe 4 yd. bucket-track)
- (1) 500 Hopta (backhoe 4 yd. bucket-track)
- (2) Case Backhoes
- (1) 825 Compactor Cat
- (1) 815 Compactor Cat
- (2) Hustler Vibrators
- (7) Track Loaders
- (4) 977 Track Loaders (3yd. Bucket)
- (3) 955 Track Loaders (2 yd. Bucket)
- (5) D3 Cats
- (1) D4 Cat
- (4) Compressors

Garnite Construction Co.
P.O. Box 780
Salinas, CA (408) 424-1555
Watsonville, CA (408) 724-1011
Monterey, CA (408) 394-1433

Can handle emergency cleanup
operations as needed.

Monterey Peninsula Paving & Grading
231 Dela Zina (408) 372-4591
Monterey, CA

- (1) 645 Loader
- (1) HGL1 Loader
- (1) Cat grader
- (1) Peterbuilt transfer 20 yd. dump
- (1) Low Bed (Transfer truck)
- (1) HD16 Dozer
- (1) Alis Charmer roller - AC blade
- (1) Galio roller (bucket type)
- (1) Michigan Motor Blade
- (1) Vibrator roller
- (2) Cat Dozers
- (2) Loaders
- (1) Water truck
- (2) Pickup trucks
- (1) Service truck
- (1) 10 yd. dump truck
- (1) Roller (Paver)

Pacific Asphalt Sealing Inc. (209) 478-5843
1308 West Robinhood Drive
Stockton, CA

- (2) Cat Dozers D8
- (3) Motor Graders
- (2) Water trucks
- (6) Dump trucks
- (2) Scrapers
- (20) Pickup trucks

S.M. McGraw Co. (209) 982-4750
2216 East Miner Avenue
Stockton, CA

- (1) Cat dozer
- (2) Cat truck loaders
- (3) Wheel loaders Cat & Huff
- (5) Cat Blades
- (#) Scrapers
- (6) Dump trucks
- (4) Backhoes
- (20) Pickup trucks
- (3) Water trucks
- (6) Tractors
- (2) Compactors
- (2) Transports

- (2) Bottom Dumps
- (2) Stam back (transfer)
- (2) Bob Tails 7 ton
- (3) 10 wheeler
- (1) Parson's Trencher
- (2) Hydro-Tamper

Case Power & Equipment (916) 428-1507
7849 Stockton Blvd.
Sacramento, CA 95823

Rentals

Backholes
Loaders
Dozers
Crawlers
Excavators

Redwood Empire Aggregates (707) 822-4853
Guitoli Lane
Arcata, CA

- (2) D-7 Cats
- (3) Motor Graders
- (4) Dump trucks
- (4) Loaders rubber tires
2-7 yds.
- (2) Water trucks
- (1) 621 J Scraper self loading
- (1) Small tractor loader
- (6) Pickup trucks

Kadle Construction Co. (707) 839-1061
2277 River Road
Arcata, CA

Engineering Contractor
have all equipment necessary to
handle any emergency cleanup
operation.

Joseph La Malfa, Engineering Contractor
251 Stripp Lane (707) 462-6675
Ukiah, CA

- (3) Cat Doyer D8
- (2) Motor Graders
- (3) Water trucks
- (1) Dump truck 10 yds.
- (2) D W 20 Scraper
- (1) Cat 80 Pull Scraper
- (3) Pickups

Associated General Contractors

300 South Wells (702) 329-6116
Reno, NV

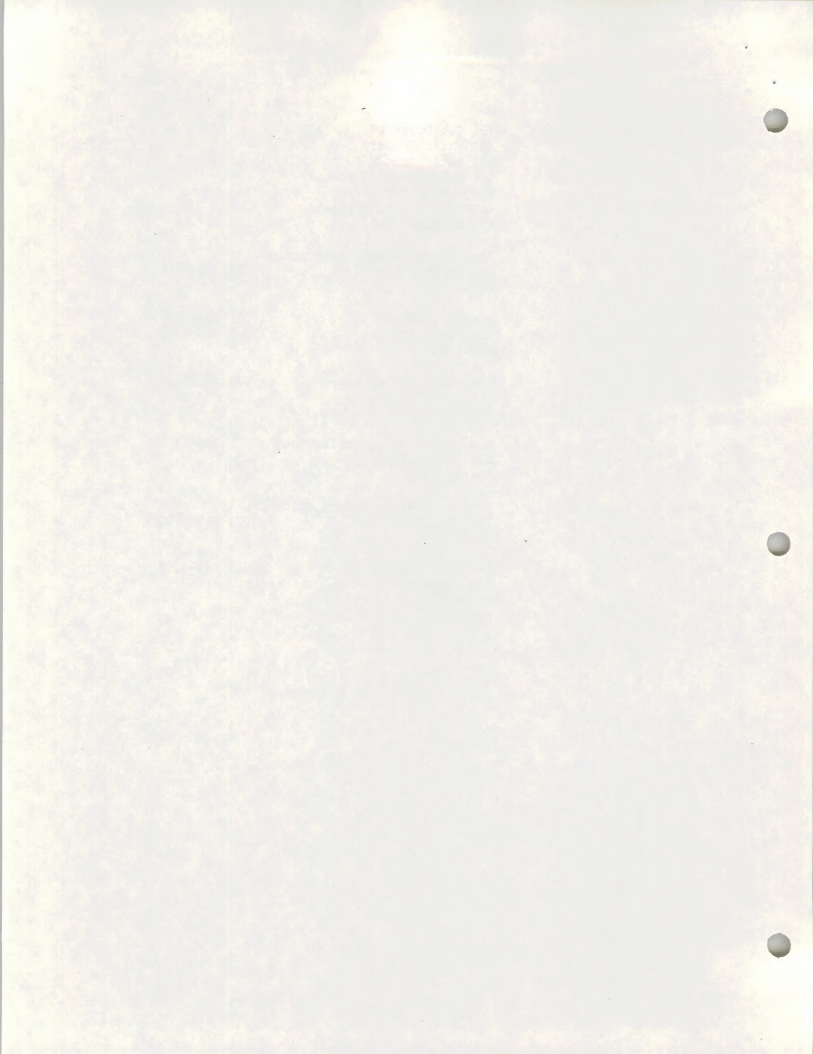
Harker & Harker (702) 329-0407
2301 West 4th St. (702) 323-7200
Reno, NV

George E. Miller (702) 323-6196
111 Merrill Ave.
Reno, NV

H.M. Byars Construction Co. (702) 786-3120
2355 Glendale Rd.
Sparks, NV

Robert L. Helms Construction Co.
790 E. Lincoln Way (702) 359-1720
Sparks, NV

CIC Construction Co. (702) 849-1200
140 Cheyenne Drive
Steamboat Valley
Reno, NV



STRAW AND HAY SUPPLIES

B&B Trucking (707) 822-6836
2705 Alliance Road
Arcata, CA

Contractor for straw and hay supplies.
If not available at time of request,
can make contact from other sources.

Nilson Company (707) 442-3741
502 Broadway
Eureka, CA

Straw - 12 tons
Hay - 100 tons

Bill's Feed & Ranch Supply (916) 991-2960
7029 - 18th Street
Rio Linda, CA

Oat Hay - 7 to 9 tons
Wood Shavings - 112 bales

Riley's Feed Store (707) 279-4641
Argonaut Road & Highway
Kelseyville, CA

Straw - 20 bales
Hay - 10 bales

Farmers Feed Co., Inc. (209) 465-5739
1302 East Miner Avenue
Stockton, CA

Hay (Oat) - 5 bales
Wood Shavings - 5 bales
Straw - 20-40 bales

Albers Garden & Ranch Center (702) 323-8625
755 Timber Way
Reno, NV

Ghiglieri & Nichols Feeds (702) 322-7164
309 North Park
Reno, NV

Pioneer Equipment Co. (702) 323-1333
525 Kietzke Lane
Reno, NV

Jensen Water Pumps (702) 329-1741
Record Supply Co.
300 Valley Road
Reno, NV

Berkeley Pumps (702) 329-4485
Reno Supply Co.
7468 South Virginia
Reno, NV

Deming Pumps (702) 358-6510
Crane Supply Co.
1675 Crane Way
Sparks, NV

Johnson Pumps (702) 358-6715
Valley Pump Company
575 South 16th St.
Sparks, NV

Cerri Feed Co. (209) 982-4865
2949 South Airport Way
Stockton, CA

Hay (Oat) - 5,000 to 6,000 tons
Straw - 200 tons
Wood Shavings - 400 bales

Robinson Farms (209) 466-7915
7000 South Inland Drive
Roberts Island, CA
(near Stockton)

Alfalfa Hay - 1,000 tons
Cat Hay - 400 tons
Straw - 5 tons

AA Feed Depot (415) 993-5444
Peralta road (415) 359-1627
Linda Mar, CA

Hay - 2 tons
Straw - 25 tons

Hollister Feed Co. (408) 637-5308
Hollister, CA (408) 628-3550

Wood shavings - 500 bales

Salinas Feed & Seed (408) 424-4879
136 East Market
Salinas, CA

Hay - 2 tons
Wood Shavings

Jackson's Hay, Grain & Milling
4370 Alvarado Canyon Road (714) 284-2023
San Diego, CA

Hay - 4 to 5 tons
Straw - 10 bales

Harrison-Riedy Grain Co., Inc.
725 S. Mollison (714) 447-4424
El Cajon, CA

Hay - 10 tons
Straw - 7 tons



OIL AND HAZARDOUS SUBSTANCES
POLLUTION CONTINGENCY PLAN
FOR INLAND WATERS
ENVIRONMENTAL PROTECTION AGENCY
REGION IX

100 INTRODUCTION

101 Background and Authority

101.1 The development of a national awareness and concern over the hazards and damages to water-related resources from oil pollution can be traced in large part to the sinking of the tanker, TORREY CANYON. This marine casualty off the coast of England caused a massive oil discharge with a tragic destruction of water-related resources along both the English and French coasts. But more importantly, it galvanized the United States into action and caused us to assess our own capabilities to cope with massive discharges of oil and other hazardous substances.

101.1-1 The Secretary of the Interior and the Secretary of Transportation documented our unpreparedness to deal with a catastrophic oil discharge and clearly pointed to many areas of need for Federal action in a report, Oil Pollution - A Report to the President (February 1963). Regarding contingency planning, the report stated, "Such planning must be done at a local level to cope with major spills and catastrophes. The contingency plans must take into account the available resources of manpower, materials and equipment, and technology in the light of physical and geographic factors. These must be integrated into a systematic approach for controlling pollution from all spills - both large and small. In addition, communications among the individuals concerned must be established, and both command and technological responsibility predetermined as a part of the Plan in order to minimize confusion, misunderstanding, and lost motion when an emergency arises..."

101.2 In Public Law 91-224, the 91st Congress indicated that "The President shall prepare and publish a National Contingency Plan for removal of oil...Such...Plan shall provide for efficient, coordinated and effective action to minimize damage from oil discharges...The President, in section 4 (a), responsibility to the Council on Environmental Quality (CEQ) to carry out subsection (c) (2) of Section 11 of the Act, providing for the preparation, publication, revision, and amendment of a National Contingency Plan for the removal of oil."

The National Oil and Hazardous Substances Pollution Contingency Plan was developed by the CEQ in June 1970, and revised in August 20, 1971. The revised National Contingency Plan, after publication in the Federal Register (36 F.R. 162, August 20, 1971, P. 16215, et seq.), became the national required procedure for response to spills of oil and hazardous materials. This document is directed toward fulfilling the responsibilities outlined under the law.

101.3 The Federal Water Pollution Control Act as amended (33 U.S.C. 1151, et seq.) and the National Contingency Plan also specify the requirement for preparation of regional, state, subregional, and local contingency plans for spills of the subject materials. The Department of Transportation (U.S. Coast Guard) is responsible for regional plans for coastal waters. The Environmental Protection Agency (EPA) is responsible for regional plans for inland waters, and this revised plan was prepared to satisfy the latter requirement. Criteria for preparation of state, subregional and local plans have been developed by EPA and published in the Federal Register (36 F.R. 228, November 25, 1971) and the Code of Federal Regulations (40 CFR 109). The latter document is available from, EPA, Region IX, upon request.

101.4 Federal agencies whose actions or operations involve handling, usage, or development of oil or hazardous materials are also required to develop spill prevention and contingency plans, and the above referenced criteria apply to these plans. (Executive Order 11507, February 5, 1970 and the National Contingency Plan).

101.5 Certain industrial dischargers are also required, as a special condition for a Federal permit (i.e., a Refuse Act Permit), to develop spill prevention and contingency plans. The above referenced criteria also apply to this requirement (36 F.R.67 of April 7, 1971, or 33 CFR Chap. 2 209. 131).

101.6 The EPA has been delegated some additional responsibilities relating to both coastal and inland waters, among which are those related to the granting of permits for discharge of oil for demonstration or research purposes; specifying the usage of chemicals in oil spill incidents; administering spill prevention regulations on non-transportation related facilities; defining legal limitations on discharges of oil; assuring preparation of state, sub-regional, and local contingency plans for spills; and instituting legal action to secure relief from an imminent or substantial threat of a discharge of oil into or upon the navigable waters of the United States.

102 Purpose and Objectives

102.1 This Plan (including annexes) provides a pattern of coordination and integrated response by departments and agencies of the Federal Government to protect the environment from the damaging effects of pollution spills. It also promotes the coordination and direction of Federal, state, and local response systems and the development of local government and private capabilities to handle such pollution spills.

102.2 The objectives of this plan are: to develop appropriate preventive and preparedness measures and effective systems for discovering and reporting the existence of a pollution spill; to institute, promptly, measures to restrict the further spread of the pollutant; to assure that the public health and welfare are provided adequate protection; to apply techniques to clean up and dispose of the collected pollutants; and to institute actions to recover cleanup costs and to effect enforcement of existing Federal statutes. Detailed guidance toward the accomplishment of these objectives is contained in the basic plan, the annexes, and the sub-regional plans.

103 Scope

103.1 This plan is for the inland waters, their tributaries, and adjoining shorelines located within the Environmental Protection Agency (EPA), Region IX, which includes the states of Arizona, California, Hawaii, Nevada, the territories of American Samoa and Guam, and the Trust Territories of the Pacific Islands.

103.2 The provisions of this Regional Oil and Hazardous Substances Contingency Plan are applicable to all Federal agencies. Implementation of the plan will be within the framework of the National Oil and Hazardous Substances Contingency Plan, and will be compatible and complementary to currently effective joint international contingency plans, assistance plans, agreements, security regulations and responsibilities based upon Federal statutes and executive orders.

105 Definition (in alphabetical order)

105.1 Act -- amends the Federal Water Pollution Control Act, as amended)33 U.S.C. 1151, et seq.)

105.2 Discharge -- includes, but is not limited to, any spillage, seepage, leaking, pumping, pouring, emitting, emptying, or dumping.

105.6 Hazardous Polluting Substances -- is matter of any description or origin other than oil which, when discharged into any waters in quantities, presents and imminent and substantial hazard to the public health or welfare, including finfish, shellfish, or wildlife, and shorelines and beaches, or threatens to lower the water quality below the criteria of the applicable water quality standards.

105.7 Inland Waters -- generally are those navigable fresh waters upstream from coastal waters and include water courses of all types, seas, lakes ponds, or impoundments, and lands areas.

105.8 Major Disaster -- any flood, drought, fire, hurricane, earthquake, storm, or other catastrophe in any part of the United States which, in the determination of the President, is or threatens to become of sufficient severity and magnitude to warrant disaster assistance by the Federal Government to supplement the effort and available resources of state and local governments in alleviating damage, loss, hardship or suffering.

105.9 Major Spill -- a spill of oil of more than 10,000 gallons in the inland waters inland of a line drawn across the ocean headlands, or more than 100,000 gallons in the coastal waters, or a spill of any material of any size of such nature and quantity that human health or welfare are substantially threatened (See Section 105.11 also).

105.10 Medium Spill -- a spill of oil of 1,001 gallons to 10,000 gallons in the inland waters inland of a line drawn across the ocean headlands, of 10,001 gallons to 100,000 gallons in the coastal waters, or a spill of any material of any size that poses a threat to the water quality or aquatic environment (See also Section 105.11).

105.11 Minor Spill -- a spill of oil of less than 1,000 gallons in the inland waters inland of a line drawn across the ocean headlands, or less than 10,000 gallons in the coastal waters, or a spill of small quantities of other substances. Note: Spills that (1) occur in or endanger critical water areas; (2) receive major display in the public press; (3) become the focus of an enforcement action; (4) pose as a threat to human health or welfare, should be classified as a medium or major spill, depending upon the degree of impact.

105.12 Navigable Waters -- For purposes of delineating applicability of this plan and agency responsibilities for response to; spills of oil and hazardous materials, navigable.

waters are defined herein as (a) those waterways which have been used or were suitable for use in the past by the public for purposes of interstate or foreign trade or commerce, (b) those waterways presently used or suitable for use by the public for purpose of sport boating, trade, or commerce and (c) those waterways which could be made suitable in the future by reasonable improvements for use by the public for purposes of trade or commerce, (d) those waterways delimited by Federal court or agency action as "navigable," (e) all of those marine waters affected by the ebb and flow of the tides and (f) primary tributaries to the above waters (See Section 105.13 and Annex IV).

105.13 Non-navigable Waters - all water excluded by the above definition for navigable waters (Section 105.12) and including secondary tributaries to navigable waters such as intermittent streams, storm drains, ponds, water courses and dry or wet land which are not usually associated as a part of a stream course or as determined by Congress or court decision.

105.14 Oil -- any kind or form of oil including, but not limited to, crude oil, fuel oil, sludge oil refuse, refined oil, and oil mixed with waters other than dredged spoil.

105.15 Potential Spill -- is an accident or other circumstances which threatens to result in the discharge of oil or other hazardous substance.

105.16 Primary Agencies -- those departments or agencies designated to have primary responsibility and resources to promote effective operation of this plan. These agencies are: DOD, DOT, DOI, the EPA, and those Federal and state agencies designated in Section 305.1, for sub-regional plans.

105.17 Public Health or Welfare -- includes consideration of all factors affecting the health and welfare of man, including but not limited to human health, the natural environment, fish, shellfish, wildlife, and public and private property, shorelines and beaches.

105.18 Remove or Removal -- the removal of oil or hazardous polluting substance from the water and shorelines, or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare.

105.19 United States -- means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

200 POLICY AND RESPONSIBILITY

201 Federal Policy

201.1 The Congress has declared that it is the policy of the United States that there should be no discharges of oil into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone (Section 11 (b) (1) of the Act). Additionally, Sections 12 (c) and 11 (b) (4) of the Act require the reporting of discharges of hazardous polluting substances and oil to appropriate authority and authorizes Federal cleanup actions. Further, the discharge in harmful quantities of oil into or upon the waters of the contiguous zone is prohibited except under such circumstances or conditions as the President may, by regulation, determine. It must also be emphasized that this Nation, in November 1970, announced a goal of no intentional discharges of oil to the seas by the end of this decade.

201.2 The primary thrust of regional plans is to provide a Federal response capability at the regional level. The ON-Scene Coordinator (OSC) shall determine if the person responsible for the discharge of oil or hazardous polluting substances has reported the discharge in accordance with Section 11 (b) (4) or Section 12 (c) of the Act, and is taking adequate action to remove the pollutant or adequately mitigate its effects. The OSC should, if practicable, insure that the person responsible for the spill is aware of his responsibility and is encouraged to undertake necessary countermeasures. When such person is taking adequate action, the principal thrust of Federal activities shall be to observe and monitor progress and to provide advice and counsel as may be necessary. In the event that the person responsible for a pollution spill does not act promptly, does not take or propose to take proper and appropriate actions to contain, clean up, and dispose of pollutants or the discharger is unknown, further Federal response actions shall be instituted as required in accordance with Section 11 (c) (1) of the Act.

201.3 The Federal agencies possessing facilities or other resources which may be useful in a Federal response situation will make such facilities or resources available for use in accordance with the National Oil and Hazardous Materials Pollution Contingency Plan, as supplemental by this Regional

Plan. Agencies making resources available shall make such assignments consistent with operational requirements, within the limits of existing authority and within the spirit of the President's intentions to minimize discharges and their effects when they do occur.

201.4 Because Federal agencies other than the OEP; or the public or private agency that caused the pollution spill, have primary responsibility and resources for alleviating or eliminating the pollution hazard, there appears to be little additional Federal assistance that could be made available as the result of a major disaster declaration. It appears, therefore, that a Presidential major disaster declaration will rarely be involved in a pollution spill.

202 Federal Responsibility

202.1 Each of the primary Federal agencies and Advisory Federal agencies has responsibilities established by statute, Executive Order or Presidential Directive, which may bear on the Federal response to a pollution spill. This Plan intends to promote the expeditious and harmonious discharge of these responsibilities through the recognition of authority for action by those agencies having the most appropriate capability to act in each specific situation. Responsibilities and authorities of these several agencies, relevant to the control of pollution spills, are detailed in the annexes. In the development of this Regional Plan, provision will be made to assure recognition of the statutory responsibilities of all involved agencies.

202.2 The Council on Environmental Quality is responsible for the preparation, publication, revision or amendment of the National Contingency Plan in accordance with Section 4 (a) Executive Order 11548. The Council will receive the advice of the NRT on necessary changes to the plan and shall insure that any disagreements arising among members of the NRT are expeditiously settled.

202.3 The Environmental Protection Agency is responsible for chairing the National Response Team and the inland Regional Response Team. In this capacity, it will assure that the Plan is effectively and efficiently implemented with optimum coordination among Federal agencies, and it will recommend changes in the Plan to the CEQ, as deemed necessary. Additionally, EPA has responsibility for publishing this Plan. The EPA is also responsible for development, revision, and implementation, as necessary, of regional plans for the inland navigable waters; and for which; it has responsibility to furnish or provide for the CSC. Through its resources, the EPA will provide technical

expertise to the NRT and RRT's relative to water pollution control techniques, including assessment of damages and environmental restoration measures.

202.4 The Department of Transportation, through the U.S. Coast Guard, serves as vice-chairman of the NRT, chairman of the coastal Region Response Team, and supplies expertise in the fields of navigation, port safety and security, and maritime law enforcement. Additionally, the Coast Guard maintains continuously manned facilities that are capable of command, control, and surveillance for spills occurring on the coastal waters of the United States or the high seas. The Coast Guard is responsible for implementing, developing and revising, as necessary, the regional plans for those areas where it is assigned, the responsibility to furnish or provide OSC's (Section 306.2). The EPA will provide guidance to and coordinate with the DOT regarding pollution control and the protection of water and related land resources in preparation of such plans.

202.5 The Department of Commerce, through NOAA and Mar Ad, provides support to the NRT, RRT, and OSC with respect to: marine environmental data, living marine resources; current and predicted meteorological, hydrologic, and oceanographic conditions for the high seas, coastal, and inland waters; design, construction, and of operation of merchant ships; and maps and charts, including tides and currents for coastal and territorial waters.

202.6 The Department of Health, Education, and Welfare is responsible for providing expert advice and assistance relative to those spills that constitute or may constitute a threat to public health and safety.

202.7 The Department of Defense, consistent with its operational requirements, may provide assistance in critical pollution spills, and in the maintenance of navigation channels, salvage, and removal of navigation obstructions.

202.8 The Department of the Interior, through the USGS, supplies expertise in the fields of oil drilling, producing, handling, pipeline transportation. Also, the USGS has access to and supervision over continuous manned facilities which can be used for command, control, and surveillance of spills occurring from operations conducted under the Outer Continental Shelf Lands Act. Additionally, the Department of the Interior will provide, through its Regional Coordinators, technical expertise to the OSC and the RRT with respect to land, fish and wildlife and other.

resources for which it is responsible. The DOI is also responsible for American Samoa and the Trust Territory.

202.9 The Department of Justice can supply expert legal advice to deal with complicated judicial questions arising from spills and Federal Agency responses.

202.10 The Office of Emergency Preparedness will maintain an awareness of pollution incidents as they develop. The normal OEP procedures will be followed to evaluate any request for a major disaster declaration received from a Governor of a State. If the President declares that a pollution spill constitutes a major disaster under PL 91-606, the Director, OEP, will provide coordination and direction of the Federal response in accordance with OEP policies and procedures.

202.12 All Federal agencies are responsible for minimizing the occurrence of spills and for developing the capability to respond promptly in cases of spills from facilities they operate or supervise, and for making resources available for Regional spill response operations. Primary agencies, however, have the following additional responsibilities: for leading all Federal agencies in programs to minimize the number of and environmental damage associated with spills from facilities they operate or supervise; to develop, within their operating agencies, the capability for a rapid, coordinated response to any spill, for providing official representation to NRT and RRT; for making information available as may be necessary; and for keeping RRT informed, consistent with National security consideration, of changes in the availability of resources that would affect the operation of this Plan.

203 Non-Federal Responsibility

203.1 The participating states' agencies that are responsible for water pollution control will coordinate directly with other state groups, centralizing their particular capabilities. As the respective states progress in developing plans to utilize the resources available in their areas, this information will become a part of this Regional Plan. The direct involvement of state resources will be initiated through the directors of the designated state operating authority for response to spills of oil and hazardous materials.

203.2 The SOA will be the single spokesman to EPA for all other states agencies. In addition, in the event state funds become available for cleanup, these agencies would be expected to have direct responsibility for their allocation.

204 Delineation of Responsibility to Respond to Spills

204.1 The National Contingency Plan relates to the navigable waters of the United States and provides for response to spills of all sizes into these. The Plan divides the responsibility in navigable waters between EPA and the USCG. The USCG has responsibility for receiving reports of and responsibility for spills into inland navigable waters.

204.2 Responsibility for receiving reports of and responding to spills in non-navigable waters rests with the several states territories and/or sub-regional agencies as outlined in the various local plans.

204.3 Responsibility for response to a spill occurring on a Federal facility lies with the controlling Federal agency and will be handled as outlined in Section 306.2 of the National Contingency Plan.

* * * * *

503 Notification

503.1 Sections 11 and 12 of the Act require that all harmful discharges of oil and all discharges of hazardous substances into or upon the navigable waters of the U.S. must be reported immediately to the appropriate Federal authority. Designation of the Federal agents to receive such reports are contained in Title 33, Part 153, Subpart B, CFR, published by the USGC, and are available through the agency's district headquarters. Such reports are to be made to the nearest USCG or EPA office, which will, on a reciprocal basis, refer notice of the spill to the agency having jurisdiction. Section 11 (b) (4) states;

- (4) Any person in charge of a vessel or of an off-shore facility shall, as soon as he has knowledge of any discharge of oil from such vessel or facility in violations of paragraph (2) of this subsection, immediately notify the appropriate agency of the United States Government of such discharge. Any such person who fails to notify immediately such agency of such discharge shall, upon conviction, be fined not more than \$10,000, or imprisoned for not more than one year, or both. Notification received pursuant to this paragraph or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except a prosecution for perjury or for giving a false statement.

503.2 Federal regulations (33 CFR 153, Subpart A and B) and the National Contingency Plan stipulate to whom reports of spills should be made, to fulfill the required reporting. In inland navigable waters, the report should be made to the EPA. In coastal waters the report should be made to the U.S. Coast Guard. A reciprocal arrangement exists between the two to take any reported spill and if not in its own area of jurisdiction, to relay the report to the other agency.

505 Strike Force for Inland Waters

505.1 Within Region IX, EPA has established a regional strike force, headed by Mr. B. David Clark, Director of the Surveillance and Analysis Division. Depending upon the type and seriousness of the spill incident, the composition of, and the activation of any part of this strike force will be at his discretion.

505.2 A nucleus National level strike force, consisting of personnel trained, prepared, and available to provide the necessary services to carry out this plan has been established by the USCG. This force has a unit located on the West Coast. The National level strike force will be available, if requested to assist in response during pollution spills. EPA may request assistance of the National level strike force through the appropriate USCG District Commander, Area Commander, or the Commandant, USCG for assistance in inland water spills. The strike force will direct the operation of any government-owned specialized pollution cleanup equipment and will function under the OSC.

505.3 Local strike force teams, consisting of personnel from operating units within the region, will be designated as soon as all state and local plans are developed and coordinated with the Regional Plan. They shall be trained, prepared, and available to provide necessary services to implement the Plan. The services of the local strike force teams will be obtained through the District Commander, USCG, for coastal water areas; or through EPA Regional Headquarters (San Francisco) for inland water areas. These teams are to be capable of merging with other strike forces within the region, and within their respective areas of legal operation. They are to be capable of supplementing the National Level strike force. The local strike force teams should be capable of full independent response to all minor spill situations, and joint coordinative response to medium or major spill situations.

506 Nuclear Pollution

506.1 In the event of a nuclear pollution incident the procedures of the Interagency Radiological Assistance Plan shall apply.

600 AMENDMENTS AND CHANGES

601 General

601.1 This Regional Plan for Inland Waters was developed in accordance with the National Contingency Plan and was concurred in by the Primary Agencies. Recommendations for amendments or changes to this Plan may be submitted to the Regional Response Team by any primary or advisory agency. Amendments will be developed to modify the basic plan; changes will be developed to modify the Annexes to this Plan, subject to the approval of the Regional Administrator of EPA, as chairman.

1800 ENFORCEMENT PROCEDURES

1800 Introduction

1801 The On-Scene Coordinator (OSC) in charge at the scene of a pollution incident may be from any one of several agencies. Therefore, it is necessary to establish uniform procedures for notification of counsel, collection of sample and information consistent with several phases in Federal response situations. Necessary information and sample collection must be performed at the proper times during the Federal involvement in a spill for the purpose of later use in identifying the party responsible, in cleanup cost recovery, damage recovery, and civil and criminal enforcement actions under appropriate Federal statutes. Time is of great importance since wind, tide and currents may disperse or remove the evidence and witnesses may no longer be available. Thus, during the phases of discovery and notification, containment and countermeasures, cleanup and disposal, and restoration, the OSC must take the necessary action to put counsel on notice of the event and to ensure that information, records, and samples adequate for legal and research purposes are obtained and safeguarded for future use.

1804 Action to be Taken by OSC

1804.1 Investigate observed instances of oil or other hazardous substances pollution in the waters covered by the scope of this Plan. Investigative actions may include:

1804.1-1 Request permission to enter facility or vessel involved. The investigator should identify himself and explain his reason for being there. In those situations where statutory authority does not exist for entering or boarding and if permission to enter or board is denied, investigator should seek assistance of local U.S. Marshal.

1804.1-2 Question all persons who may be responsible for or have knowledge of the spillage and record the name, addresses and position of each witness.

1804.1-3 Furnish anyone who may be responsible for an offense with an appropriate warning as to his rights.

1804.1-4 Obtain signed statements wherever possible indicating where, when and how the spill occurred and its extent.

1804.1-5 When a witness makes an oral statement but will not give a written statement, reduce the oral statement to writing.

1804.1-6 When the source of the pollution is unknown, obtain as much information as possible and note any suspect vessels or facilities.

1804.2 When investigation discloses a reasonable basis to believe a violation has occurred, collect samples of oil of hazardous polluting substances from the water and from appropriate spaces and drainage points of the suspected offending vessel or vessels, shore establishments, or other sources. Collect comparative samples in unaffected water in the vicinity of the spill.

1804.3 Samples collected are to be transmitted for analysis, using special courier or registered mail (return receipt requested) and observing the procedures outlined below. The analytical laboratory is the EPA laboratory in Alameda, California. Reports of laboratory analysis will be forwarded to the appropriate RRT for transmittal to counsel. The Chairman, RRT, will also forward copies of the laboratory reports to the NRT.

1804.4 Photographs should be taken, if possible, using color type film. The photographs should show the source and the extent of the pollution. The following information should be recorded

on the back of each photographic print: (a) name and location of vessel or facility; (b) date and time the photo was taken, (c) names of the photographer and witnesses; (d) shutter speed; and lens opening; and (e) type of film used and details of film processing. (The immediate developing type of photographic process may be of major assistance to the less than professional photographer by allowing on-the-spot inspection of results and "retakes" as needed to obtain an acceptable photograph.)

1804.5 If in doubt as to whether or not a particular case may be an oil pollution or hazardous materials pollution violation, or in doubt as to how to proceed in any given case, contact the RRT for instructions and advice. If, however, time is a critical factor and/or the RRT has not yet assembled, proceed as if the incident were a pollution violation.

1805 Sample Collection Procedures to be followed by CSC

1805.1 Several precautions must be observed when taking and handling liquid samples for analysis as the character of the sample may be affected by a number of common conditions. These precautions concern: (a) the composition of the container; (b) cleanliness of the container, and (c) manner in which the sample is taken.

1805.2 In taking such samples, the following procedures are to be followed in all cases:

1805.2-1 Glass containers of one quart size are to be used. The portion of the closure (sealing gasket or cap liner) which may come into contact with the sample in the container is of considerable importance. Where oil or petroleum based hydro-carbons are to be sampled, the closure should be made of glass, aluminum foil, or teflon. Other pollutants may require different or special closure material and the analysis laboratory should be consulted whenever a question arises as to the appropriateness of any closure material.

1805.2-2 Previously unused containers are preferred. Containers that have been cleaned with a strong detergent, thoroughly rinsed, and dried may be used.

1805.2-3 Samples must be properly labeled.

1805.2-4 Consult with the analysis laboratory personnel relative to special samples and unusual problems.

1805.2-5 Some explanatory notes covering the above procedures are: (a) Glass containers always must be used because plastic containers, with the exception of teflon, have been found in some cases to absorb organic materials from water and in other cases compounds have been dissolved from plastic containers; (b) as it is desirable to take a large sample of the pollutant, proper skimming techniques should be used to obtain a sufficient amount of oil for analysis; and; (c) since it is not unusual for a pollution condition to change rapidly, samples should be taken in a timely fashion, and the time sequences and places noted.

1806 Chain of Custody Record

1806.1 All samples and other tangible evidence must be maintained in proper custody until orders have been received from competent authority directing their disposition. Precautions should be taken to protect the samples from breakage fire, altering and tampering. It is important that a chain of custody of the samples be properly maintained and recorded from the time the samples are taken until ultimate use at the trial of the case. In this regard, a record of time, place, and the name and title of the person taking the sample, and each person handling same thereafter must be maintained and forwarded with the sample.

1807 Spill Pollution Report

1807.1 The information for each pollution spill should be obtained by the CSC and reported pursuant to the appropriate instructions.

1507.2-1 Situation

1507.2-1A The situation section should provide full details on; the spill, including what happened, type and quantity of material, who is involved, extent of coverage, duration of spill, areas threatened, predicated movement, success of control efforts, and prognosis.

1507.2-1-B The location should be expressed in general and specific terms. The general location would include ports (including harbor areas), terminals, beaches, and other navigable waterways or river areas. The specific location would be expressed as the geographic location

of the affected area.

1507.2-1-C The type of material would include the general nature or characteristic, such as persistent or non-persistent oil, toxic material or corrosive matter. If known, type would also include the specific nature of the material (i.e., gasoline, benzene, sodium cyanide, or sulfuric acid).

1507.2-2 Action

1507.2-2-A The action section should include a summary of all action taken by the responsible party, State and local forces, the Federal government, or any others.

1507.2-2-B The action section should include all planned action by the responsible party, State and local forces, the Federal Government, and any others.

1507.2-3 Recommendations

1507.2-3-A Any recommendations that the OSC has pertaining to the response should be included in the recommendations section.

1507.2-4 Status

1507.2-4-A the status section would indicate case closed, case pends, or Federal participation terminated, as appropriate.

1508 Administrative Report Requirements

1508.1 At the conclusion of the activity resulting from a spill, the OSCs involved will; pursuant to applicable instructions of their own agencies, submit a complete report of the incident and the actions taken to their respective Regional or State agency.

1508.2 In addition to the report required for resulting activity, any spill which indicates a need for amendment to the plans, introduces new control techniques, or is otherwise of widespread interest, should be documented and reported as appropriate.

1508.3 The primary purpose of these reports is for evaluating control techniques and response activities. Lengthy narrative not required for an understanding of the problems or recommendations, need not be included. Sufficient descriptive information should, however, be included to permit full evaluation of the report.

* * * * *

1901.1 The primary thrust of this Plan is to encourage the person responsible for a spill to take appropriate remedial actions. Usually this will mean that the cost of containment countermeasures and cleanup with respect to spills of oil or other hazardous substances should be borne by the person responsible for the discharge. The OSC and other officials associated with the handling of a spill should make substantial effort to have the responsible person accept voluntarily this financial responsibility.

1901.2 Actions undertaken by the Primary Agencies in response to pollution spill emergencies shall be carried out under existing programs and authorities insofar as practicable. It is recognized, however, that the separate agencies may have funds available specifically for dealing with pollutions and related incidents.

1901.3 It is not envisioned that any Federal agency will make resources available, expend funds, or participate in operations in connection with spills unless such agency can so respond in conformance with its existing authority. Authority to expend resources will be in accordance with the agencies basic statutes and, if required, through cross-servicing agreements. This plan encourages interagency agreements whenever specific reimbursement agreements between Federal resources are deemed necessary to insure that the Federal resources will be available for a timely response to a pollution emergency.

1902 Funding Responsibility

1902.1 The funding, including reimbursement to Federal agencies, other agencies, contractors and others, of pollution removal activities is the responsibility of the agency providing the predesignated OSC. This fundig may be provided through normal operating expense accounts of the agency or through special funding arrangements such as the Pollution Revolving Fund described hereinafter.

1902.2 Funding of response actions not associated with the removal activity, such as scientific investigations, law enforcement or public relations, is the responsibility of the agency having statutory or executive responsibility for those specific actions.

1903 Agency Funding

1903.1 The Environmental Protection can provide funds to insure timely initiation of cleanup actions in those instances where the OSC is an EPA representative. Funding of continuing cleanup actions, however, will be determined on a case-by-case basis by the Headquarters Office of EPA. Inasmuch as EPA does not have funds provided for this purpose, by statute or regulation, initiation of containment and cleanup activities is funded out of operating program funds.

1903.2 The U.S. Coast Guard pollution control efforts are under "Operating Expenses." These funds are utilized in accordance with applicable Regional Plans and agency directives.

1903.3 The Department of Defense has two specific sources of funds which may be applicable to a pollution incident under appropriate circumstances. This does not consider military resources which might be made available under specific circumstances.

1903.1-1 Funds required for removal of a sunken vessel or similiar obstruction to navigation are available to the Corps of Engineers through Civil Fuctions Appropriations, Operations and Maintenance, General.

1903.1-2 The U.S. Navy has funds available on a reimbursable basis to conduct salvage operations.

1904 Disaster Relief Funds

1904.1 Certain pollution control response activities may qualify for reimbursement as disaster relief functions. In making a declaralaon of a major disaster for a stricken area, the President may allocate funds from his Disaster Relief Fund, administered by the Director, Office of Emergency Preparedness. After the President has declared a major disaster and authorized allocation of funds, the Director may authorize certain reimbursements to Federal agencies for disaster

assistance provided under direction of his office. Applicable policies and procedures are stated in title 32, Chapter XVII, Part 1709, "Reimbursement of Other Federal Agencies Performing Major Disaster Relief Functions."

1904.2 The Director may also make financial assistance available to State Governments and through the States to local governments in accordance with policies and procedures stated in Title 32, Chapter XVII, Part 1710, "Federal Disaster Assistance."

1905 Pollution Revolving Fund

1905.1 A pollution revolving fund (hereinafter referred to as the Fund) administered by the Commandant, USCG, has been established under the provisions of Section 11 of the Act. This fund is available to pay specified costs associated with spill response operations. Regulations governing administration and use of the funds are contained in 33 CFR, Part 153D, April 13, 1971.

1905.2 The Fund is available to pay the costs of removal of oil discharged into the navigable waters and adjoining shorelines of the United States. It is also available to pay the costs of removal of discharges of hazardous polluting substances, provided the material has been designated as a hazardous polluting substance pursuant to Section 12(a) of the Act.

1905.3 Examples of specific costs reimbursable to a Federal agency for spill response operations are:

1905.3-1 Costs incurred by industrial type facilities, including charges for overhead, in accordance with the agency's industrial accounting system;

1905.3-2 Out-of-pocket costs specifically and directly incurred as a result of recovery activities such as:

-2.1 Travel, including transportation and per diem, when specifically requested by the OSC.

-2.1 Supplies, materials, and minor equipment procured specifically for response activities.

1905.4 Some limitations on use of the Fund are:

1905.4 Restriction of reimbursement for expenditures

made for Phase II and Phase III response actions;

1905.4-2 Personnel and equipment costs which are funded by other appropriations and which would have been incurred during normal operations; and

1905.4-3 Costs of surveillance activities, restoration of damages following a spill, or investigative functions performed in support of enforcement action or scientific documentation.

1905.4-4 The Fund is not available to pay cost incurred for actions to remove oil or hazardous polluting substance discharged from a U.S. public vessel or Federally controlled facility.

1905.5 The Commandant, USCG, has distributed detailed instructions to assist in the determination of appropriate costs by the OSC.

1906 General Limitations on Funding

1906.1 Care must be exercised to ensure that misunderstandings do not develop about reimbursement of funds expended for containment and cleanup activities. The OSC should not knowingly request services for which reimbursement is mandatory unless reimbursement funds are known to be available. Similarly, the agency supplying a reimbursable service should determine the source of reimbursement before committing resources necessitating reimbursement.

1907 Planning

1907.1 The availability of funds and requirements for the reimbursement of expenditures by certain agencies must be included in resource utilization planning. Local interagency agreements may be necessary to specify when reimbursement is required.

2800 Inventory of Oil Cleanup Services, Equipment, and Materials in Region IX

2801 Environmental Protection Agency

The Regional EPA Office does not maintain cleanup equipment. During a major spill, the primary source of equipment and materials would be secured through contract agreements with private contractors and suppliers.

Laboratory services are available through the EPA Regional Office for the analysis of samples taken during a spill.

2802 For a useful listing of oil cleanup services equipment and materials available for use in Region IX coastal waters which could also be mobilized for inland spills, see the Region IX Pollution Contingency Plan issued by the Twelfth Coast Guard District.



APPENDIX 4
CLASS I DISPOSAL SITES

Casmalia Disposal Site Santa Barbara, CA 93108	(805) 969-4703
Environmental Protection Bakersfield, CA 93301	(805) 327-9681
Environmental Disposal Service Coalinga, CA 93210 Kettleman North Dome, Kings County Site	(209) 935-0851
Limited Class I (pesticides) Fresno County Depart. Public Works East Kings Canyon Rd. Fresno, CA 93702	(209) 488-3806
Hollister Disposal Site Hollister, CA 95023	(408) 637-4491 (San Benito City Hall)
Industrial Tank Co. 210 Berellisa St. Martinez, CA	(415) 228-5100 (office)
and	
E. 112 G. St. Benicia, CA	
Los Angeles County Sanitation 2020 Beverly Blvd. Los Angeles, CA 90057	(212) 484-1370
Sites: Palos Verde Landfill, Palos Verdes, CA Cala Basas Landfill, San Fernando Valley *West Covina Landfill, West Covina, CA	
Omar Rendering Co. Chula Vista, CA	(714) 422-5311
Operating Industries Monterey Park, CA 91754	(213) 726-3202

Richmond Sanitary Service (415) 234-3304
Richmond, CA

San Diego County Refuse Disposal
5555 Overland Rd. (714) 565-5703
San Diego, CA

Ventura County Dept. Public Works
Ventura, CA (805) 648-2717

Nuclear Engineering Co. Inc. (Radioactive waste)
Box 4308
Walnut Creek, CA 94596 (415) 933-0770
Disposal Site - Beatty, NV

*Operated by B.K.K. Corp. (213) 830-7662
3031 E. I St.
Wilmington, CA 90744

federal register

MONDAY, MARCH 13, 1978
PART II



ENVIRONMENTAL
PROTECTION
AGENCY

WATER PROGRAMS
Hazardous Substances

[6560-01]

Title 40—Protection of Environment

(FRL 529-2)

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER D—WATER PROGRAMS

PART 116—DESIGNATION OF HAZARDOUS SUBSTANCES

AGENCY: Environmental Protection Agency.

ACTION: Final rulemaking.

SUMMARY: The Administrator of the Environmental Protection Agency is issuing this regulation for the designation of an initial list of 271 substances as hazardous. This regulation designates hazardous substances, other than oil, under a provision of the Federal Water Pollution Control Act (the Act). This regulation is issued concurrently with three additional final rules on the discharge of hazardous substances in this same separate part of the Federal Register. The other three final rules determine their removability, harmful quantities when discharged to water and rates of penalty for the discharge of each of these hazardous substances. Concurrently with the issuance of the four final rules on the discharge of hazardous substances, the Agency also is issuing under the Act a proposed rule in this same separate part of the Federal Register which would add 28 substances to the designation list of hazardous substances.

EFFECTIVE DATE: June 12, 1978, except for vessels. For vessels the effective date is September 11, 1978.

FOR FURTHER INFORMATION CONTACT:

Kenneth M. Mackenthun, Director, Criteria and Standards Division (W18-585), Office of Water Planning and Standards, U.S. Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460, 202-755-0100.

SUPPLEMENTARY INFORMATION: The Administrator of the Environmental Protection Agency proposed in the Federal Register of December 30, 1975 (40 FR 59960), to create a new Part 116 in Title 40 of the Code of Federal Regulations, designating hazardous substances other than oil under section 311(b)(2)(A) of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) (the Act). The discharge of oil is regulated under 40 CFR Part 110. At the same time, the removability, harmful quantities, and rates of penalty for those substances were also proposed as Parts 117, 118, and 119, respectively. Final promulgation of those regulations is concurrent with this rulemaking. Concurrent with this rulemaking, the Agency also is

proposing by separate notice in this Federal Register the addition of substances to the designation list of hazardous substances.

Section 311(b)(2)(A) of the Act provides:

The Administrator shall develop . . . regulations designating as hazardous substances . . . such elements and compounds which, when discharged in any quantity into or upon the navigable waters of the United States or adjoining shorelines or the waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or which may affect natural resources belonging to, or pertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976), present imminent and substantial danger to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, shorelines, and beaches.

The substances designated as hazardous in this rulemaking are subject to a number of provisions of section 311 of the Act. Pursuant to section 311(b)(6), discharge of such a substance to the navigable waters, adjoining shorelines or the contiguous zone in excess of a harmful quantity (harmful quantities are set forth in Part 118 of this chapter) is cause for imposition by the U.S. Coast Guard of a civil penalty of up to \$5,000. Under section 311(b)(7) a discharge of such a substance (if determined not removable in Part 117 of this chapter) can lead to a civil penalty assessed by EPA of up to \$500,000 in the case of a vessel or \$500,000 in the case of an onshore facility. Section 311(b)(5) requires that a discharge of a hazardous substance in a harmful quantity be reported to the proper U.S. Government authorities. Failure to report can lead to a fine of up to \$10,000 or imprisonment of up to one year, or both. Reporting procedures are set forth in 33 CFR Part 153. Finally, sections 311(f) and (g) provide that one who discharges a hazardous substance is liable (subject to certain limited defenses) for the costs incurred by the United States Government in cleaning up or otherwise mitigating the effects of the discharge.

Relationship to Other Toxic Pollutant Control Programs: The promulgation of this regulation is a major component of the Environmental Protection Agency's strategy to regulate the discharge of the Nation's waters of toxic and hazardous substances. With the promulgation of hazardous substances regulations pursuant to section 311, a person is legally responsible for reporting a spill of any toxic or hazardous substance and the Nation has a national hazardous chemical spill control program. Further, the Environmental Protection Agency and the U.S. Coast Guard can use the section 311(c) "revolving fund" to take mitigating actions against a hazardous

substance discharge in those cases where a responsible or liable person fails to do so. In addition, these regulations will activate the penalty system that should provide a meaningful economic incentive for industries to take greater precautions in the handling of hazardous materials. These regulations provide a vital link in the comprehensive program to control toxic and hazardous chemical discharges to water which includes reliance on technology-based effluent limitations as the principal abatement mechanism for such discharges, use of toxic effluent standards under Section 307(a) for the limited number of cases in which the effluent limitations will not provide environmental protection, development of best management practices to control toxic chemicals from nonpoint sources in conjunction with water quality management planning under Section 208, and use of water quality based limitations of Section 302 and water quality standards as supplements to technology-based effluent limitations in the remaining cases where effluent limitations are inadequate and Section 307(a) toxic effluent standards are inappropriate on a nationwide basis. Other laws involved in the Agency's strategy to control the discharge of toxic and hazardous materials include the Resource Conservation and Recovery Act, the Toxic Substances Control Act, and the Safe Drinking Water Act.

Designation of Hazardous Substances:

The substances included on the list of hazardous substances in §116.4 of this Part (1) meet the toxicological selection criteria delineated herein and (2) have a reasonable potential for being discharged.

Selection Process: The Agency developed and proposed in December 1975 (40 FR 59961) a two part selection process for designating hazardous substances. The first step consisted of evaluating elements and compounds against toxicological selection criteria. The second step consisted of screening substances meeting these criteria against discharge potential to limit them to a practical number and establish a priority of designation. The criteria are set forth below:

Toxicological Selection Process: Any element or compound or structural isomer thereof (which is lethal to:

- (a) One-half of a test population of aquatic animals in 96 hours or less at a concentration of 500 mg/l or less or similarly demonstrated acute toxicity; or
- (b) One-half of a test population of mammals in 14 days when administered as a single oral dose equal to or less than 50 mg/kg of body weight; or
- (c) One-half of a test population of mammals in 14 days when dermally exposed to an amount equal to or less than 50 mg/kg of body weight for 24 hours; or

(d) One-half of a test population of mammals in 14 days or less when exposed to a vapor concentration equal to or less than 20 cubic centimeters per cubic meter of air for 1 hour;

(e) Aquatic flora as measured by a 50 percent decrease in cell count, biomass, or photosynthetic ability in 14 days or less at concentrations equal to or less than 100 mg/l (ppm); than it was a candidate for further consideration against discharge potential.

Toxicological data for individual substances primarily were derived from the compendium of information fact sheets entitled, "Hazardous Substances Facts Sheets, 1977," which may be obtained from the Environmental Protection Agency. In addition, other primary sources of data were: "Water Quality Criteria," Federal Pollution Control Administration, 1968, "Water Quality Criteria," 1972, EPA, March 1973, and "Quality Criteria for Water," EPA 440/9-78-023, July 1978. **Discharge Potential Screening Criteria.** 1. If any substance met the toxicological selection criteria (i.e., a "candidate substance"), and was determined to have a spill history it was designated a hazardous substance.

2. If a candidate substance was determined to have an annual production equal to or greater than 1 billion pounds, it was designated a hazardous substance.

3. If a candidate substance was determined to have an annual production of less than 1 billion pounds and:

a. If it is used primarily as a pesticide, it was designated a hazardous substance.

b. If use was unknown, it was not further considered for designation.

c. If use is limited to research, medicinal, food additives, or analytical reagents, it was not further considered for designation.

4. If a candidate substance was determined to have an annual production of less than one billion pounds and determined to have uses other than "a," "b," or "c" above, then the selling price of the substance at the first commercial market level was examined. Available evidence appeared to indicate that substances with relatively high selling prices had a smaller discharge frequency, since more expensive chemicals are generally packaged and shipped in smaller quantities, and with greater precautions. If a candidate substance had a high selling price relative to the majority of substances, it was not further considered for testing. This was done to ensure that materials of relatively low market price and relatively high toxicity, i.e., meeting the toxicological selection criteria, were given the first priority.

Because the discharge potential screening criteria were used solely to permit the Agency to establish a priority system for designating substances

as hazardous materials, such screening does not preclude the designation of a substance initially not designated, if toxicological data or other factors support its addition to the designation list.

The end result of this two-part selection process was the list of substances proposed on December 30, 1975. Only two substances in that proposed listing met one of the toxicological criteria other than that dealing with aquatic animal toxicity: they were acetone cyanohydrin and adiponitrile. Since that time, data supporting the aquatic animal toxicity of acetone cyanohydrin have been obtained.

The derivation of the harmful quantities for designated substances was proposed concurrently with the designation of proposed hazardous substances in December 1975, and is finalized concurrent with this promulgation. As proposed, the derivation of harmful quantities utilized a modification of an international categorization system. This system, discussed in detail in the proposal (40 FR 39986), proved to be cumbersome. In addition, the process required certain subjective judgments that could not be developed. Due to those problems, a simplified system for establishing hazardous categories and harmful quantities has been adopted and is explained in Part 118. Basically, the new harmful quantity categorization process considers only the aquatic toxicity of the substances. The effect of this modification on the final designation is that toxicological effects other than aquatic are not considered in this initial priority list of hazardous substances. For this reason, adiponitrile is deleted from this final rulemaking. It should be clearly understood that this decision does not in any way affect the validity of all of the proposed toxicological selection criteria and they may be used in the future to expand upon this initial listing. Furthermore, additional selection criteria based on other acute or chronic toxicological effects on man or the environment will be developed and used to further expand upon this initial designation.

The applicability provisions of Parts 116, 117, 118, and 119 are written to conform to the amendments made in section 311 of the Federal Water Pollution Control Act by the Clean Water Act of 1977.

The Clean Water Act of 1977 extended the scope of section 311 to include discharges in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976). These regulations

apply to the full extent of the scope of section 311 as amended. Since the regulations previously did not distinguish between discharges into different types of water bodies but instead applied uniformly wherever applicable, and because Congress gave no indication that it intended the regulations to differentiate between waters within or beyond the outer limits of the contiguous zone, the extension of the scope of the regulations requires no changes in the substance of the regulations themselves. Further discussion of this point may be found in the preamble to Part 118.

Comments. Interested persons were given until March 1, 1978, to submit written comments on all aspects of the proposed rules. One hundred and forty-eight (148) letters containing comments were received and reviewed prior to this rulemaking of which several substantive comments suggested the designation of hazardous substances.

Toxicological Selection Criteria: The concept of utilizing definitive criteria for the designation of hazardous substances was generally supported. However, many comments suggested certain changes to clarify the proposed criteria.

a. Several commenters suggested that the designation and determination of harmful quantities should be based on effects actually observed as a result of discharge. An example provided dealt with the expression of pH changes when a variety of substances are introduced to water. It was suggested that the discharge of any material which resulted in a pH change in the receiving water in excess of 3 pH units would constitute a harmful quantity discharge of a hazardous substance.

The suggested approach does not meet the requirements of the Act. Section 311(b)(2)(A) requires the designation of substances as hazardous rather than their circumstances of discharge. Moreover, section 311(b)(2)(A) requires that elements and compounds be designated and numerous elements, compounds or combinations thereof can produce a given pH change. Furthermore, the requirement for immediate notification under section 311(b)(5) and 40 CFR 118.7 in the event of a harmful quantity discharge appears to preclude the use of an effect resulting from a discharge as a basis for determining hazard. Persons responsible for giving notice frequently are not prepared to make a rapid determination of effects such as changes in pH or pollutant concentration. Because failure to notify the Federal government immediately of discharges in excess of the harmful quantity triggers criminal penalties, adoption of the suggested approach was not considered feasible.

b. It was suggested that the persistence of substances be considered in the selection criteria. The comments expressed the opinion that substances which are either degraded or converted to innocuous materials by chemical or biological processes in relatively short periods of time should not be designated as hazardous for the purposes of section 311.

Chemical and biological degradation of pollutants are recognized phenomena. However, the selection criteria as adopted deal with acute effects. Most discharge events which are the primary concern of these rules are shock loadings resulting in elevated pollutant concentrations. In these cases, the degradability of the material has little immediate ameliorating effect. Lethal effects generally are exerted in the relatively short time period of high concentration before neutralization or degradation processes make significant contributions. The persistence of substances as characterized by their ability to bioaccumulate is expected to be incorporated into the derivation of selection criteria for proposing candidates for addition to the hazardous substances list.

c. Several comments dealt with the concentration limit proposed for the selection criterion for aquatic toxicity data. Some of those commenters believed the proposed selection limit of 500 mg/l was excessive and should be lowered; it was suggested that the selection limitation should be 100 mg/l, which would result in the listing of fewer substances. On the other hand, other commenters believed the 500 mg/l level was too restrictive and suggested the selection limit of 1,000 mg/l.

The appropriateness of the selection limit of 500 mg/l for 96-hour aquatic LC50 bioassay values was discussed in the Preamble to the proposed rules (40 FR 59961) December 30, 1975. The basis for selecting 500 mg/l as the criterion for environmental damages was that fish kills have been observed for discharges of substances with 96-hour LC50 values consistently greater than 100 mg/l. On the other hand, substances with recorded 96-hour LC50 values consistently greater than 500 mg/l have no similar history of causing environmental damages in the form of fish kills resulting from spill type discharges. For some substances, bioassay data available from the existing literature show various toxicity values. These various bioassay values reflect differences in techniques, test species, and water conditions as used by the investigator. Data resulting from tests in which water conditions approximated "typical" receiving waters were favored. The general guidelines used by the Agency to select "preferred" data points are detailed in the document entitled: "Determination of Harmful Quantities

and Rates of Penalty for Hazardous Substances" which may be obtained from the Superintendent of Documents, Washington, D.C. 20402 (Stock No. 055-001-01028-1).

d. Several commenters expressed the opinion that 96 hours was an unreasonably lengthy testing period. They argued that hazardous substance discharges are of substantially shorter duration and that the data utilized should reflect a more limited exposure time.

Although many of the discharges to be addressed by these regulations may not be of 96-hour duration, the use of 96 hours as the exposure period for testing the acute toxicity of chemicals to aquatic animals is now an accepted standard. It is important to note that these rules (40 CFR Parts 116-119) do not dictate or prescribe testing procedures which must be conducted for various chemicals. The intent in setting forth selection criteria is to clearly identify the kinds of data currently in existence which were used to derive the list of hazardous substances. Because the 96-hour testing period has long been accepted, the bulk of the more recent data in the scientific literature is in the form of 96-hour LC50 values.

e. Many comments dealt with the details of the bioassay toxicity selection criterion for aquatic animals. These comments expressed the opinion that conditions as well as species must be identified and that the species should be of median sensitivity, indigenous, or of direct commercial or recreational value. In general, it was the belief of those commenting in this area that test conditions should also relate to natural waters.

Bioassays conducted under laboratory conditions are related to mortalities within the environment because every organism has a certain tolerance to a concentration of a toxic substance and that tolerance or intolerance is defined in the bioassay test. The sensitivity demonstrated by organisms when tested against various concentrations of materials under controlled laboratory conditions will be reflected by those same species within the ambient environment. The bioassay data indicate those conditions and organism responses to be expected in the environment when the tested concentrations of a substance are encountered. The organisms selected for testing in bioassays generally are those found in a large number of our natural waters. In bioassays conducted in recent years, natural waters are used as the diluent for the toxic material in the test.

f. Several comments addressed the selection criterion for aquatic plant life. It was suggested that experimental variables should be specified in the criterion, that the 14-day exposure period should be shortened, or that the criterion should not be considered at all.

Although no substances in the current list were selected on the basis of toxicity to aquatic vegetation, the selection criterion is maintained in recognition of the important role of plant life in the maintenance of balanced aquatic ecosystems. Although few data are currently available on the toxicity of substances to aquatic flora, parameters generally viewed as those which constitute an appropriate bioassay determination of phytotoxicity may be found in Biological Field and Laboratory Methods Measuring the Quality of Surface Waters and Effluents, which may be obtained from the Environmental Protection Agency (EPA 670/4-73-001). According to that reference, 14 days has been selected as a standard testing period for the bioassay of periphyton. Therefore, no change has been made in the time period for acute toxicity for aquatic plants.

g. Many comments addressed various aspects of the criteria proposed for the evaluation of mammalian toxicological data. These comments included recommendations that the proposed observation time of 14 days be shortened, that all mammalian toxicological criteria be deleted, that inhalation or dermal exposure should be deleted because the data are inappropriate, or that the proposed LD50 limitation of 50 mg/kg for oral exposure was overly protective and should be lowered.

Section 311 clearly requires the protection of public health or welfare. Because the use of mammalian toxicological test data to evaluate a substance's potential for impairing human health has a substantial history of acceptance, a general deletion of the mammalian toxicological selection criteria is not acceptable. The discharge of chemicals which are toxic via skin absorption can threaten recreational water uses such as swimming and boating even though these substances may be diluted by the receiving waters. In the case of inhalation, wind and wave action may release dissolved chemicals to the atmosphere resulting in human exposure via inhalation. The toxic effects of chemicals to mammals from all exposure routes are deemed to be appropriate for the designation of hazardous substances and the mammalian toxicological criteria are maintained. The dosage levels proposed and adopted herein are generally accepted as indicative of highly toxic substances. Observation periods specified are those which are generally accepted as appropriate for toxicological testing.

h. Several comments expressed the opinion that the proposed selection criteria should be expanded to include additional considerations of toxicological effects, including carcinogenicity, mutagenicity, and teratogenicity as well as bioaccumulation.

The Agency recognizes the merits of these comments. However, in its initial efforts to promulgate section 311 regulations, the Agency has taken the position that those substances that are acutely toxic to aquatic life present an imminent hazard to the environment and should be controlled initially. This does not preclude the future expansion of the selection criteria, the list itself, or the sources and types of discharges to be regulated under section 311. Indeed, the Agency will seek to expand both the selection criteria and the list of designated hazardous substances in the months ahead. The Agency supports the general concept that episodic discharges of substances that bioaccumulate to cause subsequent damage to an organism or to its predator, or of substances that have been shown to be carcinogenic, mutagenic, or teratogenic are discharges of hazardous substances. The Agency will undertake efforts immediately to revise the selection criteria and to expand the list of hazardous substances to include such materials.

Requests for Substances to be Added: Several commenters requested that specific substances and categories of substances be added to the proposed list of hazardous substances. Suggested additions included superabsorbents, Mirex, Kepone, polybrominated biphenyls, and an additional list of 125 specific compounds.

As stated above, this is the initial effort to promulgate hazardous substances regulations pursuant to section 311 of the Act. The Agency will continue to examine the appropriateness of substances to add to the hazardous substances list. Some of the substances suggested do not meet EPA toxicity selection criteria. No data were provided by the commenters in support of their suggestions, and the Agency has not yet found data to substantiate toxic effects of some of them. When supporting data become available, these substances will be evaluated against such data and the Agency's spill potential criteria as candidates for addition to future proposed lists of hazardous substances.

The Agency will examine the published selection criteria for hazardous substances and plans to modify such criteria in the future to permit the designation of additional hazardous substances. The Agency is appreciative of suggestions for the addition of substances to the list and will continue to examine their ability to meet the selection criteria that have been established or that may be proposed for comment in the future. The Agency anticipates that proposals for additions to the hazardous substances list will be a periodic and a continuing process.

Request for Deletion of Certain Substances: Two comment letters addressed ethylenediaminetetraacetic

acid (EDTA), requesting that it be deleted because of limited discharge potential. It was argued that annual production is between 4 and 10 million pounds per year, there is no history of past spillage, the current value of the substance is \$125-135/pound, and that shipment is exclusively in 50 to 100 pound containers (5 to 10 times lower than the proposed harmful quantity of 500 pounds).

The new data were carefully examined by the Agency. The history of past discharge is negative but the production and use value considerations are borderline when compared with the judgment criteria. Because there is some potential for discharge, EDTA is retained on the designation list.

b. It was requested that ferric ammonium oxalate be deleted from the list because of low potential for discharge. Re-examination of the data on ferric ammonium oxalate indicated an average selling price of \$0.42/pound with a common shipment unit being a 250-pound drum. In addition, it cannot be categorized as a limited use compound. Therefore, ferric ammonium oxalate is maintained as a hazardous substance.

c. It was suggested that benzene, toluene, xylene, cyclohexane, ethylbenzene, and styrene all fall under the definition of oil as found in Section 311 and should be excluded from this rulemaking.

Although these substances share certain properties with oils, i.e., limited solubility and lower specific gravity than water, they are not defined as oils for the purpose of section 311 and are maintained on the list of designated substances. See the preamble to Part 117 for the rationale used by the Agency for chemically distinguishing between oils and oil-like hazardous substances.

d. It was requested that metallic sodium be removed from the designation list due to its generally safe transportation record.

Two accidents involving sodium tank cars are recorded. In one case, the integrity of the container was breached. Although neither of these resulted in a water pollution incident, the potential for discharge does exist, and sodium is maintained as a hazardous substance.

e. It was requested that calcium hydroxide and calcium oxide be deleted from the designation list, based on low discharge potential, low toxicity, and beneficial uses of these chemicals in wastewater and drinking water treatment processes. It was also requested by another commenter that, because minor spills are typical of handling the substance in its normal fashion calcium hydroxide should be deleted from the designation list.

Both substances have a history of discharge from onshore facilities. In one case, a fish kill resulted from the

discharge of calcium oxide. Toxicological data submitted with one comment letter support the selection based on lethal effects to three species of fish at 100 mg/l (ppm) in two to five hours. The beneficial usages of calcium hydroxide and oxide are not disputed or contradicted by the designation of these substances. It is not the intent to this rulemaking to restrict the proper usage, handling, and transport of any designated substance. Rather, the intent is to encourage the reduction of non-permitted discharges and the mitigation of environmental damages when discharges occur. Calcium hydroxide and calcium oxide are therefore maintained as hazardous substances.

f. One comment letter requested that ortho-xylene be deleted from the designation list because the material is not persistent and does not severely reduce amenities when discharged.

Ortho-xylene is toxic to a variety of aquatic life at concentrations of 21 to 30 mg/l (ppm) in 96 hours. The substance has a history of discharge and is, therefore, maintained as a designated hazardous substance.

g. It was suggested that all substances which have not been specifically tested for aquatic toxicity be deleted from the designation.

When inorganic salts are placed in water, and the well-known chemical phenomena of ionization and complexation solubilization occur, the events result in the release, to the water, of the toxic ion in its biologically active form. Listing only those salts of toxic ions which have been specifically bioassayed would disregard the basic chemical process of ionization and solubilization. Therefore, when acute toxicity data on one ion of a soluble salt indicate that the salt meets the hazardous substances toxicity criteria, other salts of which that ion is a component are appropriately judged to be hazardous substances. Those proposed salts having at least one soluble ion which meets our toxicity criteria for aquatic animals are retained as hazardous substances.

h. One comment letter addressed the inclusion of lead sulfide on the proposed list of hazardous substances. It was argued that the limited solubility of lead sulfide did not qualify it as a hazardous substance.

The acute toxicity of lead was examined as well as its water solubility. An error in the water solubility data was detected and the actual solubility was determined to be 0.9 ppm. However, the Agency position with respect to solubility and toxicity is that if the 96-hr. LC50 bioassay data indicate that the substance is within the scope of our toxicity criteria, it will be designated a hazardous substance regardless of its water solubility. Lead sulfide is therefore maintained as a hazardous substance.

1. The same letter questioned the separate designation of zinc sulfate and zinc sulfate monohydrate.

The listing of the two forms of zinc sulfate is redundant since the designation applies to all forms of the listed compounds. For example, the listing of copper sulfate is inclusive of both the common mono- and pentahydrate as well as solutions of copper sulfate. This same general designation, including all forms of the substances, is true for all listed elements and compounds. Because a separate listing for the monohydrate of zinc sulfate is redundant with the general zinc sulfate entry, zinc sulfate monohydrate is deleted. However, the designation still applies to it as one of the hydrates of that compound. Parenthetically it is noted that, for the purpose of computing the harmful quantity under part 118, the most commonly hydrated form of the salt was used.

1. One comment appealed the designation of salts of dodecylbenzene sulfonic acid. However, no data were submitted in support of that appeal.

A review of the toxicity data reveals lethal effects of the sodium salt of dodecylbenzene sulfonic acid to a variety of aquatic species within the limits used as selection criteria. Industrial and domestic use and distribution of these materials contribute to an assessment of reasonable potential for discharge. Therefore, these substances are maintained as hazardous substances.

k. Additional supporting data and requests for deletion of substances included: aluminum fluoride—based on aquatic toxicity; aluminum sulfate—based on beneficial use; ammonium bicarbonate—based on discharge potential; and antimony pentafluoride—based on discharge potential.

Static bioassay data submitted for aluminum fluoride indicate a 96-hour LC50 value in excess of 10,000 mg/l to the fathead minnow. On the basis of these new data, aluminum fluoride is deleted from the final designation list.

Like calcium hydroxide and oxide, aluminum sulfate has recognized beneficial uses in both wastewater and drinking water treatment. These beneficial uses do not alter the fact that it falls within the scope of the toxicological selection criteria and that improper use and spill type discharges can result in environmental damage. Therefore aluminum sulfate is maintained as a designated hazardous substance.

Although ammonium bicarbonate is extensively used in the food industry, the substance is also used in the manufacture of dyes and as a degreasing agent in the textile industry. Annual production is estimated to be sixteen million (16,000,000) pounds with a low selling price of \$0.10 to \$0.12 per pound. Relatively large production,

low selling price, and diverse industrial use indicate that the substance has a reasonable discharge potential and ammonium bicarbonate is maintained as a designated hazardous substance.

Data submitted in support of deleting antimony pentafluoride included annual production quantities of less than 5,000 pounds and a selling price of \$15 per pound. Use data indicate only limited application as a catalyst in organic synthesis. In light of this new information, it is agreed that antimony pentafluoride has a low potential for discharge and is therefore deleted from the designation list.

1. Several commenters pointed out that although chlorine is toxic, used in many industrial processes, and produced in large quantities, its shipment in pressurized containers as a liquid has an enviable record of safety. These commenters believe that the safety record is indicative of a low discharge potential and they requested that consideration be given to deletion of chlorine.

Agency data support the fact that liquefied chlorine transportation has a laudable safety record. Nevertheless, discharges of chlorine in aqueous solution have occurred with resulting environmental damages. Therefore, a reasonable potential for discharge does exist and chlorine is maintained as a designated hazardous substance.

m. One comment letter pointed out that the pesticides chlorpyrifos and metacarbate were listed by their trademark rather than common name.

This oversight is corrected and these materials are listed by their appropriate common names in this final rule-making.

Potential for Discharge: Although most comment letters supported the use of discharge potential evaluations in the designation of hazardous substances, several disagreed, indicating that such considerations were inappropriate.

In order to address the many chemical substances produced and shipped in this country, it is appropriate to restrict this initial designation to those elements and compounds which are in commercial use and transported, stored, or used in quantities or processes which make it possible that a harmful quantity discharge will occur. The present assessment of discharge potential is a qualitative consideration of factors which may influence a chemical's propensity for discharge. These include production quantities, past history of discharge, use and distribution patterns, and cost of the substance and are set forth under Supplementary Information in this Part. It is anticipated that the mandatory reporting of discharges in violation of 40

CFR Part 118 will provide considerable additional data. Discharge potential screening is a necessary tool to make designation a manageable process. But it is not a mandatory requirement under the Act and is subject to reevaluation by the Agency.

Financial Responsibility: Although not directly related to the process of designating hazardous substances or the specific substances listed, a number of comment letters requested that the effective date of the designation and accompanying rules be at least six months after date of final publication to permit owners or operators of vessels to obtain the necessary evidence of financial responsibility.

Under section 311(p)(1) vessels over 300 gross tons using the waters of the United States must maintain evidence of financial responsibility to meet the liability to the United States which the vessel could be subjected under section 311. Under section 311(p)(2), the effective date for such evidence of financial responsibility for hazardous substances was October 18, 1973. Because a designation of hazardous substances was first promulgated prior to that date, the implementing regulations (48 CFR Part 542) promulgated under section 311(p)(1) are effective for hazardous substances as soon as any designation regulation becomes effective. According to 48 CFR Part 542, evidence of financial responsibility may consist of an insurance certificate, security bond, or other proof of reserve capital. Acceptance by the Federal Maritime Commission of submitted evidence will result in the issuance of a certificate to be carried on board. Failure to have the certificate on board may result in penalties and restrictions imposed by the Federal Maritime Commission. The Secretary of the Treasury and the Coast Guard under sections 311(p)(4), (5) and (6).

Insurance underwriters have refused to write coverage for hazardous substances on the basis of the proposed rules, maintaining that until the list is final, the risk and premiums cannot be evaluated. Without sufficient lead time to obtain insurance, present evidence to the Federal Maritime Commission and receive the certificate, virtually every vessel in excess of 300 gross tons will be in violation of section 311(p). The shipping industry estimates that six months will be required to obtain insurance and certification. Because of the problem faced by the shipping community a delay in effective date of 180 days is granted for vessels. However, due to the importance of these regulations no further delays in their implementation will be considered. Insurers and shippers are urged to proceed immediately with the required procedures for complying with section 311(p).

Deletions Resulting from Commenters' Recommendations: Three substances proposed as hazardous substances have been deleted for reasons specified in the comments. Those substances are:

Aluminum Fluoride
Antimony Pentafluoride
Zinc Sulfate Monohydrate

Deletions Resulting from Agency Reevaluation: As explained above, substances with usages limited to research, medicinals, food additives or analytical reagents are not further considered for designation at this time. On this basis, the list of those posed hazardous substances has been examined further since December 30, 1975, and the following 21 substances deleted on the basis of limited usage:

Limited Use

Ammonium Hypophosphite
Arsenic Acid
Chromyl Chloride
Cobaltous Fluoride
Cupric Formate
Cupric Glycinate
Cupric Lactate
Cupric Subacetate
Curious Bromide
Hydroxylamine
Lead Tetraacetate
Lead Tungstate
Lithium Bichromate
Mercuric Acetate
Mercuric Formate
Nickel Formate
Stannous Fluoride
Uranium Peroxide
Uranium Sulfate
Zinc Bichromate
Zinc Potassium Chromate

Further review of the proposed list on the basis of the toxicity criteria has in addition resulted in the deletion of the following 11 substances as not sufficiently toxic to meet the criteria:

Not Sufficiently Toxic

Adiponitrile
Ammonium Bromide
Ammonium Iodide
Ammonium Nitrate
Ammonium Pentaborate
Ammonium Persulfate
Propyl Alcohol
Sodium Phosphate, Monobasic
Sodium Sulfide
Zirconium Acetate
Zirconium Oxynchloride

Adiponitrile is deleted for reasons stated previously.

Total Alphabetical List of All Deletions:

Adiponitrile
Aluminum Fluoride
Ammonium Bromide
Ammonium Hypophosphite
Ammonium Iodide
Ammonium Nitrate
Ammonium Pentaborate
Ammonium Persulfate
Antimony Pentafluoride
Arsenic Acid
Chromyl Chloride
Cobaltous Fluoride

Cupric Formate
Cupric Glycinate
Cupric Lactate
Cupric Subacetate
Curious Bromide
Hydroxylamine
Lead Tetraacetate
Lead Tungstate
Lithium Bichromate
Mercuric Acetate
Nickel Formate
Propyl Alcohol
Sodium Phosphate, Monobasic
Sodium Sulfide
Stannous Fluoride
Uranium Peroxide
Uranium Sulfate
Zinc Bichromate
Zinc Potassium Chromate
Zinc Sulfate, Monohydrate
Zirconium Acetate
Zirconium Oxynchloride

Economic Impact Assessment: When the December 30, 1975, proposed regulations were published, it was determined that the economic impact of the designation of hazardous substances could not be separated from a consideration of removal, harmful quantities and rates of penalty. Therefore, an assessment, which was conducted in accordance with Executive Order 11821, of the combined impact of all four actions accompanied the December 30 proposal. The economic impact of the proposed regulations was not considered major.

The 1975 proposed regulations (Parts 118, 117, 113 and 119) used the concept of "gross negligence" in deciding which one of the two civil penalty alternatives (subsection (a) or subsection (b)) would be used. Based on an estimated 700 spills per year and the probability of spills requiring the use of either the (a) or (b) option, the total penalty costs were estimated to be \$2.5 million per year (\$1.9 million from (a) penalties and \$0.6 million from (b) penalties). Clean-up costs were estimated to be \$8.3 million per year.

These final regulations have abandoned the "gross negligence" concept and have substituted the "gravity-of-the-offense" approach with a list of factors to be considered in deciding which penalty option to use. Moreover, the Clean Water Act of 1977 has extended the scope of the applicability of the regulations.

The prior economic assessment has been evaluated and no substantial changes in its conclusions have been made.

Dated: March 3, 1978.

DOUGLAS M. COSTLE,
Administrator.

Part 118 is added as follows:

Sec.
118.1 Applicability.
118.2 Abbreviations.

118.3 Definitions.

118.4 Designation of hazardous substances.

Authority: Secs. 31(b)(2)(A) and 501(a), Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.).

§ 118.1 Applicability.

This regulation designates hazardous substances under section 311(b)(2)(A) of the Federal Water Pollution Control Act (the Act). The regulation applies to discharges of substances designated in Table 118.4.

§ 118.2 Abbreviations.

ppm = parts per million
mg = milligram(s)
kg = kilogram(s)
mg/l = milligram(s) per liter = (approx.) ppm
mg/kg = milligram(s) per kilogram = (approx.) ppm

§ 118.3 Definitions.

As used in this part, all terms shall have the meaning defined in the Act and as given below:

"The Act" means the Federal Water Pollution Control Act, as amended by the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500), and as further amended by the Clean Water Act of 1977, (Pub. L. 95-217), 33 U.S.C. 1251 et seq.
"Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping.

"Vessel" means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel.

"Public vessel" means a vessel owned or bareboat-chartered and operated by the United States, or a State or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.

"Onshore facility" means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land.

"Offshore facility" means any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel.

"Navigable waters" is defined in section 502(7) of the Act to mean "waters of the United States, including the territorial seas," and includes, but is not limited to: (1) all waters which are presently used, or were used in the past, or may be susceptible to use as a means to transport interstate or foreign commerce, including all waters which are subject to the ebb and flow

of the tide, and including adjacent wetlands; the term "wetlands" as used in this regulation shall include those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas; the term "adjacent" means bordering, contiguous or neighboring; (2) tributaries of navigable waters of the United States, including adjacent wetlands; (3) interstate waters, including wetlands; and (4) all other waters of the United States such as intrastate lakes, rivers, streams, mudflats, sandflats and wetlands, the use, degradation or destruction of which affect interstate commerce including, but not limited to:

(i) Intrastate lakes, rivers, streams, and wetlands which are utilized by interstate travelers or recreational or other purposes; and

(ii) Intrastate lakes, rivers, streams, and wetlands from which fish or shellfish are or could be taken and sold in interstate commerce; and

(iii) Intrastate lakes, rivers, streams, and wetlands which are utilized for industrial purposes by industries in interstate commerce.

"Contiguous zone" means the entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone.

"Territorial seas" means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of 3 miles. A discharge "in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976)," means (1) A discharge into any waters beyond the

contiguous zone from any vessel or on-shore or offshore facility, which vessel or facility is subject to or is engaged in activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, and (2) any discharge into any waters beyond the contiguous zone which contain, cover, or support any natural resource belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976).

"Aquatic animals" means appropriately sensitive wholly aquatic animals which carry out respiration by means of a gill structure permitting gaseous exchange between the water and the circulatory system.

"Animals" means appropriately sensitive animals which carry out respiration by means of a lung structure permitting gaseous exchange between air and the circulatory system.

"Aquatic flora" means plant life associated with the aquatic eco-system including, but not limited to, algae and higher plants.

"Mixture" means any combination of two or more elements and/or compounds in solid, liquid, or gaseous form except where such substances have undergone a chemical reaction so as to become inseparable by physical means.

"LC50" means that concentration of material which is lethal to one-half of the test population of aquatic animals upon continuous exposure for 96 hours or less.

§116.4 Designation of hazardous substances.

The elements and compounds appearing in Tables 116.4 A and B are designated as hazardous substances in accordance with section 311(b)(2)(A) of the Act. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing these substances. Synonyms and Chemical Abstract System (CAS) numbers have been added for convenience of the user only. In case of any disparity the common names shall be considered the designated substance.

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TABLE 118.4A.—List of hazardous substances

Common name	CAS No.	Synonyms	Isomers	CAS No.
Acetaldehyde	75070	Ethanal, ethyl aldehyde, acetic aldehyde.		
Acetic acid	64197	Glaucal acetic acid, vinegar acid		
Acetic anhydride	108247	Acetic oxide, acetyl oxide		
Acetone cyanohydrin	75865	2-methylacetonitrile, aldolhydroxyacetonitrile.		
Acetyl bromide	506947			
Acetyl chloride	79387			
Acrotoxin	107028	2-propenal, acrylic aldehyde, acrylaldehyde, acrolein.		
Acrylonitrile	107121	Cyanoethylene, P-methyl, Vemiox, propenitrile, vinyl cyanide.		
Aldrin	309002	Octalene, EHDN		
Allyl alcohol	107186	3-propen-1-ol, 1-propenol-3, vinyl carbinol		
Allyl chloride	107051	3-chloropropene, 3-chloropropylene, Chloroallylene		
Aluminum sulfate	10043013	Alum		
Ammonia	7664417			
Ammonium acetate	531818	Acetic acid ammonium salt		
Ammonium benzoate	188284			
Ammonium bicarbonate	1066337	Acid ammonium carbonate, ammonium hydrogen carbonate		
Ammonium bichromate	7739095			
Ammonium bifluoride	1341497	Acid ammonium fluoride, ammonium hydrogen fluoride		
Ammonium bisulfite	10192300			
Ammonium carbonate	1111780	Ammonium sesquicarbonate		
Ammonium carbamate	506476			
Ammonium chloride	12125029	Ammonium muriate, sal ammoniac, salmiac, Amchlor		
Ammonium chromate	7738989			
Ammonium citrate dibasic	3012855	Diammonium citrate, citric acid diammonium salt		
Ammonium fluoroborate	12222330	Ammonium fluoroborate, ammonium borofluoride		
Ammonium fluoride	12125018	Neutral ammonium fluoride		
Ammonium hydrosulfide	1314214			
Ammonium oxalate	5009707			
	1472704			
	14284492			
Ammonium silicofluoride	16919190	Ammonium fluosilicate		
Ammonium sulfamate	7772660	Ammonia, alkyl ammonium ammonosulfate		
Ammonium sulfide	12135761			
Ammonium sulfite	10190040			
	10192300			
Ammonium tartrate	2164292	Tartaric acid ammonium salt		
	14397428			
Ammonium thiocyanate	1762954	Ammonium rhodanide, ammonium isothiocyanate, ammonium pseudocyanide		
Ammonium thiosulfate	7783188	Ammonium hyposulfite		123972
Amly acetate	828637	Amlyacetic ester	sp	828380
		Pear oil	ec	
		Paraffin oil	ert	825161
Aniline	62533	Aniline oil, phenylamine, anilinoacetone, anilinoacetone, anilino		
Antimony pentachloride	7647169			

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TABLE 118.4A.—List of hazardous substances—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Antimony potassium tartrate	28300745	Tartar emetic, tartarized antimony, tartarized antimony, potassium antimonytartrate.		
Antimony tribromide	7789619	Butler of antimony		
Antimony trichloride	10025919	Antimony fluoride		
Antimony trifluoride	7763564	Antimony trioxide, flowers of antimony		
Antimony trioxide	1309644			
Arsenic disulfide	1303328	Red arsenic sulfide		
Arsenic pentoxide	1303285	Arsenic acid anhydride, arsenic oxide		
Arsenic trichloride	7784341	Arsenic chloride, arsenious chloride, arsenous chloride, buster of arsenic		
Arsenic trioxide	1327533	Arsenious acid, arsenious oxide, white arsenic		
Arsenic trisulfide	1303338	Arsenous sulfide, yellow arsenic sulfide		
Barium cyanide	542621			
Benzene	71432	Cyclohexatriene, benzol		
Benzonic acid	95850	Benzenecarboxylic acid, phenylformic acid, benzoic acid		
Benzonitrile	100470	Phenyl cyanide, cyanobenzene		
Benzoyl chloride	98884	Benzenecarbonyl chloride		
Benzyl chloride	100447			
Beryllium chloride	7787475			
Beryllium fluoride	7787497			
Beryllium nitrate	7787555			
Butyl acetate	13387894			
	122864	acetic acid butyl ester	iso—	110190
			sec—	105464
			tert—	540885
Butylamine	109739	1-aminobutane	iso—	78819
			sec—	813495
			tert—	13952846
			iso—	75649
				79312
Butyric acid	107926	Butanoic acid, ethylacetic acid		
Calcium acetate	542906			
Calcium bromide	7787416			
Calcium chloride	10103862			
Calcium arsenate	7778441	Tricalcium orthoarsenate		
Calcium arsenite	52740166			
Calcium carbide	7207	Carbide, acetylenogen		
Calcium chromate	13765190	Calcium chrome yellow, gelatin yellow, ultramarine		
Calcium cyanide	592018			
Calcium	26264062			
dodecylbenzenesulfonate				
Calcium hydroxide	1305620	Lime, hydrated, slaked lime, calcium hydrate		
Calcium hypochlorite	7778543			
Calcium oxide	1305788	Lime, quicklime		
Caplan	133062	Orthoiodo-408, SR-408, Vanicide-89		
Carbaryl	83253	Sevin		
Carbon disulfide	75150	Carbon bisulfide, ditluocarbonic anhydride		
Chlordane	57748	Toxkaulor, chlordan		
Chlorine	75003			
Chlorobenzene	106997	Monochlorobenzene, benzen chloride		
Chloroform	67663	trichloromethane		
Chlorpyrifos	2921883	Dursban		
Chlorosulfonic acid	7760945	Sulfuric chlorohydrin		
Chromic acetate	1066304			
Chromic acid	11115745	chromic anhydride, chromium trioxide		
Chromic sulfate	10101538			
Chromous chloride	10049055			
Cobaltous bromide	7783437	Cobalt bromide		
Cobaltous formate	544183	Cobalt formate		
Cobaltous sulfamate	14017415	Cobalt sulfamate		
Coumadinone	56724	Co-Ral		

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TABLE 116.6A.—List of hazardous substances—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Cresol	1319773	Cresylic acid	m	108394
		Hydroxytoluene	p	96487
			p	106445
Cupric acetate	142712	Copper acetate, crystallized verdigris		
Cupric arsenosulfate	12002038	Copper arsenosulfate, copper arsenic arsenite, Paris green		
Cupric chloride	7447394	Copper chloride		
Cupric citrate	2251238	Copper citrate		
Cupric oxalate	3833663	Copper oxalate		
Cupric sulfate	7758987	Copper sulfate		
Cupric sulfate, ammoniated	10380297	Ammoniated copper sulfate		
Cupric tartrate	8185277	Copper tartrate		
Cyanogen chloride	506774			
Cyclohexane	110827	Hexahydrobenzene, hexamethylene, hexanaphthene		
2,4-D acid	94797	2,4-dichlorophenoxyacetic acid		
2,4-D ester	94791	2,4-dichlorophenoxyacetic acid ester		
	94804			
	1270188			
	1928387			
	1928616			
	1929733			
	2971382			
	23182507			
	23487111			
DDT	50293	p,p'-DDT		
Diazinon	333415	Diazinon, Diazinon, Spec-tricide		
Dicamba	1918009	2-methoxy-3,6-dichlorobenzoic acid		
Dichlobenil	1194456	2,6-dichlorobenzenetriole, 2,6-DIB		
Diclofop	117806	Phygon, dichloroanethoxybenzoic acid		
2,2-Dichloropropionic acid	73990	Dalapon		
Dichlorvos	62737	2,2-dichlorovinyl dimethyl phosphate, Vapona		
Dieldrin	50371	ALIN		
Diethylamine	106897			
Dimethylamine	124403			
Dinitrobenzene (mixed)	2515453	Dinitrobenzol	m	39650
			p	106254
			(2,5-)	122715
Dinitrophenol	5128	Aldifen	(2,6-)	573568
	(2,4-)			
Diquat	15097	Aquacide		
	2764729	Detrans, Regione, Diquat dibromide		
Doxiflufen	298044	DI-eyfen		
Durom	130541	OCMU, DMU		
Dodecylbenzenesulfonic acid	27174870			
Drochlorfan	115297	Thiodan		
Ethrin	72208	Menarun, Compound 189		
Ethion	563123	Valate, ethyl methylene phosphorothioate		
Ethylbenzene	100414	Phenylethane		
Ethylene diamine	107133	1,2-diaminoethane		
Ethylene diamine, tetraacetate acid (EDTA)	50004	Edetic acid, Edoxate, ethylenediamine tetraacetate acid		
Ferric ammonium citrate	1185975	Ammonium ferric citrate		
Ferric ammonium oxalate	2944674	Ammonium ferric oxalate		
	55486074			
	790080	Flores maris, iron trichloride		
Ferric chloride	7783506			
Ferric fluoride	7647484	Iron trifluoride		
Ferric sulfate	10028223	Ferric persulfate, ferric sesquioxide, ferric persulfate		
Ferrous ammonium sulfate	10945893	Morax salt, iron ammonium sulfate		
Ferrous chloride	7783443	Iron chloride, iron dichloride, iron protochloride		

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TABLE 116.4A.—List of hazardous substances—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Potassium sulfate	772781	Green vitriol		
	772630	Iron vitriol, iron sulfate, iron proto-sulfate		
Formaldehyde	50000	Methyl aldehyde, methanol, formalin		
Formic acid	64186	Methanoic acid		
Fumaric acid	110178	Trans-butenedioic acid, trans-1,3-ethylenedicarboxylic acid, butic acid, allomaleic acid		
Formal	96011	2-Furandimethylidene, pyromucic aldehyde		
Orthion	96500	Quaternary ammonium-methyl-		
Heptachlor	76448	Heptachlor-104, Dronox, Heptagram		
Hydrochloric acid	7647010	Hydrogen chloride, muriatic acid		
Hydrofluoric acid	7664393	Fluohydric acid		
Hydrogen cyanide	74908	Hydrocyanic acid		
Isoprene	78795	2-Methyl-1,3-butadiene		
Isopropylamine	42504461			
Sodium benzenesulfonate				
Kaithane	115322	Dip-chlorophenyl-trichloromethylcarbinol, DTMC, DTCO, DTCO		
Lead acetate	501042	Sugar of lead		
Lead arsenate	7734409			
	7445253			
	10102494			
Lead chloride	7735894			
Lead fluoroborate	13814965	Lead fluoroborate		
Lead fluoride	7733462	Lead difluoride, plumbous fluoride		
Lead iodide	10101630			
Lead nitrate	10099748			
Lead stearate	7428480	Stearic acid lead salt		
	1072251			
	52652592			
Lead sulfate	7446143			
Lead sulfide	1314870	Galena		
Lead thiocyanate	592670	Lead sulfocyanate		
Lindane	58899	Gamma-BHC, gamma-benzene hexachloride		
Lithium chromate	14307358			
Malathion	121755	Phosphorothion		
Maleic acid	110167	Cis-butenedioic acid, cis-1,3-ethylenedicarboxylic acid, maleic acid		
Maleic anhydride	108318	1,3-butadiene, cis-butenedioic anhydride, maleic anhydride		
Mercuric cyanide	592041	Mercury cyanide		
Mercuric nitrate	1004890	Mercury nitrate, mercury pernitrate		
Mercuric sulfate	7732359	Mercury sulfate, mercury persulfate		
Mercuric thiocyanate	592858	Mercury thiocyanate, mercury sulfocyanate, mercury sulfocyanide		
Mercurous nitrate	7732867			
	10415755			
		Mercury protonitrate		
Methoxychlor	73435	DMDT, methoxy-DDT		
Methyl mercaptan	74921	Methanethiol, mercaptomethane, methyl sulfhydryl, thiomethyl, isobol		
Methyl methacrylate	90626	Methacrylic acid methyl ester, methyl 2-methyl-2-propenoate		
Methyl parathion	298000	Nitro-80		
Mevindox	7736347	Fluobenz		
Misacarbale	215194	Zectran		
Monoethylamine	75047	Ethylamine, aminomethane		
Monoethylamine	74895	Methylamine, aminomethane		
Nale	300783	Dibrom		
Naphthalene	91203	White tar, tar camphor, naphthalin		
Naphthene acid	1238245	Cyclohexanecarboxylic acid, hexahydrobenzoic acid		
Nickel ammonium sulfate	15699180	Ammonium nickel sulfate		
Nickel chloride	7711055	Nickelous chloride		
	7718549			

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TABLE 115.4A.—List of hazardous substances—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Nickel hydroxide	12054-887	Nickelous hydroxide		
Nickel nitrate	14218752			
Nickel sulfide	7788454	Nickelous sulfide		
Nitric acid	7697372	Aqua fortis		
Nitrobenzene	98953	Nitrobenzol, oil of mirbane		
Nitrogen dioxide	10102440	Nitrogen tetroxide	m	354847
Nitrophenol (mixed)	25154558	Mononitrophenol	p	38755
			p	100027
Paraformaldehyde	30525894	Paraform. Formarsene. Triformol. polymerized formaldehyde, polyox- ymethylene.		
Parathion	56383	DNTP, Nirvan.		
Pentachlorophenol	87565	PCP, Penta.		
Phenol	108982	Carbolic acid, phenyl hydroxide, hy- droxybenzene, oxylene.		
Phosgene	75445	Diphosgene, carbonyl chloride, chloroformyl chloride.		
Phosphoric acid	7664385	Orthophosphoric acid		
Phosphorus	7732140	Black phosphorus, red phosphorus, white phosphorus, yellow phospho- rus.		
Phosphorus oxychloride	10025873	Phosphoryl chloride, phosphorus chloride.		
Phosphorus pentasulfide	1314603	Phosphorus sulfide, thiophosphorus anhydride, phosphorus persulfide.		
Phosphorus trichloride	7719122	Phosphorous chloride		
Polychlorinated biphenyls	1336363	PCB, Aroclor, polychlorinated di- phenyls.		
Potassium arsenate	7784410	Potassium metaarsenate		
Potassium arsenite	10194902			
Potassium dichromate	7773509	Potassium dichromate		
Potassium chromate	7789006			
Potassium cyanide	151056			
Potassium hydrosulfide	1310563	Potassium hydrosulfide, caustic potash, potassa.		
Potassium permanganate	7722647	Chamisso's mineral		
Propionic acid	79094	Propionic acid, methylacetic acid, ethyloformic acid.		
Propionic anhydride	123626	Propionic anhydride, methylacetic anhydride.		
Pyrethrins	131299	Pyrethrin I.		
	121211	Pyrethrin II.		
Quinoline	91225	1-benzazine, benzobicyclopentadiene, quinoline, quinoline, quinolin.		
Resorcinol	108463	Resorcin, 1,3-benzenediol, meta-di- hydroxybenzene.		
Selenium oxide	7446084	Selenium dioxide		
Sodium	7440235	Sodium		
Sodium arsenate	7631892	Sodium arsenate		
Sodium arsenite	7784463	Sodium metaarsenite		
Sodium bicarbonate	10046019	Sodium bicarbonate		
Sodium bisulfite	133331			
Sodium disulfide	7631905	Sodium acid sulfite, sodium hyposul- fite.		
Sodium chromate	7776113			
Sodium cyanide	143259			
Sodium decylbenzene- sulfonate	26153300			
Sodium fluoride	7681494	Vitreous.		
Sodium fluoride	1471805	Sodium hydrogen sulfide		
Sodium hydroxide	1310732	Caustic soda, soda lye, sodium hy- droxide.		
Sodium hypochlorite	7681529	Bleach		
Sodium methoxide	10022705			
Sodium nitrate	124414	Sodium methoxide		
Sodium nitrite	7632000			
Sodium phosphonate, dibasic	7556794			
	10039274			

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TABLE 116.4A.—List of hazardous substances—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
10028247	10140455			
Sodium phosphate, tribasic.	7735444			
	7801349			
	10101890			
	10361894			
	7732394			
	10124568			
Sodium selenite	10102158			
	7732323			
Strontium chromate	7789042			
Strychnine	57249			
Styrene	100425	Vinylbenzene, phenylethylene, styrol, styrolene, cinnamene, cinnamyl.		
Sulfuric acid	7664839	Oil of vitriol, oleum		
Sulfur monochloride	12771083	Sulfur chloride		
2,4,5-T acid	29755	2,4,5-trichlorophenoxy-acetic acid		
2,4,5-T ester	2945597	2,4,5-trichlorophenoxy/acetic esters.		
	93798			
	6179272			
	1228478			
	25168154			
TDE	72348	DDD		
Tetraethyl lead	78002	Lead tetraethyl, TEL		
Tetraethyl pyrophosphate	107493	TEPP		
Toluene	106623	Toluol, methylbenzene, phenylmethane, Methacide.		
Toxaphene	8001351	Camphenchlor		
Trichloroethene	52486	Dipertol		
Trichlorophenol	55167822	Dyltol, Dendroide 2 or 2S, Omal, Phenachlor.		
Triethanolamine	77232417			
Isodecylbenzenesulfonate.				
Triethylamine	121448			
Trimethylamine	75503	TMA		
Uranyl acetate	641093			
Uranyl nitrate	10102064			
	36478789			
Vanadium pentoxide	1314621	Vanadic anhydride, vanadic acid anhydride.		
Vanadyl sulfate	27774136	Vanadic sulfate, vanadium sulfate.		51.
Vinyl acetate	106034	Acetic acid/vinylene ether.		
Xylene (mixed)	1330207	Dimethylbenzene	m-	106383
			p-	25476
			o-	106423
Xyleneol	1300716	Dimethylphenol, hydroxydimethylbenzene.		
Zinc acetate	557746			
Zinc ammonium chloride	14639975			
	14639986			
	5287258			
Zinc borate	1332076			
Zinc bromide	7699458			
Zinc carbonate	3486239			
Zinc chloride	1646857	Butter of zinc.		
Zinc cyanide	557211			
Zinc fluoride	7763495			
Zinc formate	557413			
Zinc hydrosulfite	7779864			
Zinc nitrate	7779866			
Zinc phenolsulfonate	177822	Zinc sulfoncarbolsate		
Zinc phosphate	1314447			
Zinc silicofluoride	16871719	Zinc fluorosilicate		
Zinc sulfate	7733620	White vitriol, zinc vitriol, white copper.		
Zirconium nitrate	13746899			
Zirconium potassium fluoride	16923254			
Zirconium sulfate	14644612	Dianilfatsomonic acid.		
Zirconium tetrachloride	10025118			

TABLE 116.4B.—List of Hazardous Substances By CAS Number

CAS No. and common name	57663	Chloroform	57895	Isoprene
50000 Formaldehyde	71432	Benzene	78619	iso-Butyric acid
50293 DDT	72208	Ethdrin	79084	Propionic acid
51255 1,4-Dinitrophenol	72435	Methoxychlor	79312	iso-Butyric acid
52586 Trichlorfon	72549	TDE	79387	Acetyl chloride
56382 Parathion	74908	Monomethylamine	80926	Methyl methacrylate
56724 Coumatophos	74931	Hydrogen cyanide	85007	Diquat
57249 Strychnine	74901	Methyl mercaptan	85500	Guthion
57749 Chlordane	75047	Monomethylamine	87865	Pentachlorophenol
58899 Lindane	75150	Acetaldehyde	87855	o-Nitrophenol
59004 Ethylenediaminetetraacetic acid (EDTA)	75070	Carbon disulfide	91203	Naphthalene
60571 Dieldrin	75445	Calcium carbide	91225	Quinoline
62333 Aniline	75503	Phosgene	92745	2,4,5-T acid
62737 Dichlorvos	75503	Trimethylamine	92798	2,4,5-T ester
63252 Carbaryl	75649	ter-Butylamine	94111	2,4-D ester
64188 Formic acid	78665	Acetone cyanohydrin	94737	2,4-D acid
	75990	2,2-Dichloropropionic acid	94791	2,4-D ester

94804	1,4-D Butyl ester	592870	Lead thiocyanate	7732020	Zinc sulfate
95476	o-Xylene	625161	tert-Amyl acetate	7732994	Sodium phosphate, tribasic
95487	o-Cresol	626360	sec-Amyl acetate	7739943	Ferrous chloride
95911	Purfural	626637	n-Amyl acetate	7758954	Lead chloride
98884	Benzoyl chloride	611818	Ammonium acetate	7758987	Cupric sulfate
98953	Nitrobenzene	518827	Cupric tartrate	7771060	Ammonium sulfamate
99650	m-Dinitrobenzene	1065304	Chromic acetate	7775113	Sodium chromate
100097	p-Nitrophenol	1066337	Ammonium bicarbonate	7778441	Calcium arsenate
100234	p-Dinitrobenzene	1072351	Lead stearate	7778509	Potassium bichromate
100414	Ethylbenzene	1111780	Ammonium carbonate	7778543	Calcium hypochlorite
100425	Styrene	1185175	Ferrous ammonium citrate	7779884	Zinc hydrosulfite
100447	Benzyl chloride	1194656	Dichloroethyl	7779888	Zinc nitrate
100470	Benzonitrile	1300716	Xylenol	7782593	Chlorine
105444	sec-Butyl acetate	1303282	Arsenic pentoxide	7783530	Ferrous sulfate
106423	p-Xylene	1303328	Arsenic disulfide	7783233	Sodium selenite
108445	o-Cresol	1303339	Arsenic trisulfide	7782867	Mercurous nitrate
107028	Acrolein	1305620	Calcium hydroxide	7783188	Ammonium bisulfate
107051	Allyl chloride	1305788	Calcium oxide	7783359	Mercuric sulfate
107131	Acrylonitrile	1309644	Antimony trioxide	7783462	Lead fluoride
107153	Ethylendiamine	1310583	Potassium hydroxide	7783495	Zinc fluoride
107186	Allyl alcohol	1310732	Sodium hydroxide	7783508	Ferrie fluoride
107493	Tetraethyl pyrophosphate	1314621	Vanadium pentoxide	7783564	Antimony trifluoride
107928	p-Butyric acid	1314803	Phosphorus pentasulfide	7784241	Arsenic trichloride
108054	Vinyl acetate	1314847	Zinc phosphide	7784409	Lead arsenate
108247	Acetic anhydride	1314870	Lead sulfide	7784410	Potassium arsenate
108316	Maleic anhydride	1319773	Cresol (mixed)	7784465	Sodium arsenite
108335	m-Xylene	1320189	2,4-D ester	7785394	Sodium phosphate, tribasic
108394	m-Cresol	1327533	Arsenic trioxide	7786347	Mercurous
108463	Resorcinol	1330207	Xylene	7786814	Nickel sulfate
108863	Toluene	1332078	Zinc borate	7787473	Beryllium chloride
108907	Chlorobenzene	1333831	Sodium bifluoride	7787497	Beryllium fluoride
108952	Phenol	1336218	Ammonium hydroxide	7787555	Beryllium nitrate
109739	n-Butylamine	1335363	Polyvinylpyrrolidone	7788008	Ammonium chromate
109897	Diethylamine	1338245	Naphthalene	7789006	Potassium chromate
110167	Maleic acid	1341497	Ammonium bifluoride	7789062	Strontium chromate
110176	Fumaric acid	1762594	Ammonium thiocyanate	7789095	Ammonium bichromate
110190	iso-Butyl acetate	1863654	Ammonium benzoate	7789428	Cadmium bromide
110627	Cyclohexane	1918009	Dicamba	7789437	Coccalous bromide
110787	Endosulfan	1923287	2,4-D esters	7789619	Antimony tribromide
113322	Keithane	1928478	2,4,5-T ester	7790945	Chlorosulfonic acid
117806	Dichloro	1928618	2,4-D ester	8001352	Toxaphene
121211	Pyrethrin	1929733	2,4-D ester	10022705	Sodium hypochlorite
121299	Pyrethrin	2545597	2,4,5-T ester	10025873	Phosphorus oxychloride
121448	Tributylamine	2784729	Diquat	10025919	Antimony trichloride
121755	Malathion	2921882	Chlorpyrifos	10026116	Zirconium tetrachloride
123626	Propionic anhydride	3944674	Ferrie ammonium oxalate	10028225	Ferrie sulfate
123864	n-Butyl acetate	3971382	2,4-D ester	10028247	Sodium phosphate, dibasic
123922	iso-Amyl acetate	3012655	Ammonium citrate, dibasic	10039374	Sodium phosphate, dibasic
124403	Dimethylamine	3164292	Ammonium tartrate	10043013	Aluminum sulfate
124414	Sodium methylate	3251238	Cupric nitrate	10045893	Ferrous ammonium sulfate
127422	Salt penicillin sulfonate	3488359	Zinc carboxen	10045940	Mercuric nitrate
133062	Caplan	3893863	Cupric oxalate	10049085	Chromous chloride
142712	Cupric acetate	5972706	Ammonium oxalate	10099748	Lead nitrate
143339	Sodium cyanide	6009707	Ammonium oxalate	10101338	Chromic sulfate
151506	Potassium cyanide	6369688	2,4,5-T ester	10101530	Lead oxide
158000	Methyl parathion	7428480	Lead stearate	10101890	Sodium phosphate, tribasic
158044	Disulfoton	7440235	Sodium	10120684	Granny nitrate
160765	Naled	7446084	Selenium oxide	10121258	Sodium selenite
160142	Lead acetate	7446142	Lead sulfate	1012404	Nitrogen dioxide
160902	Alidrin	7447394	Cupric chloride	1012444	Lead arsenate
161384	Methidathion	7538794	Sodium phosphate, dibasic	10108642	Cadmium chloride
163715	2,6-Dinitrophenol	7601549	Sodium phosphate, tribasic	10124502	Potassium arsenite
163841	Diuron	7631892	Sodium arsenate	10124568	Sodium phosphate, tribasic
163415	Diazinon	7631905	Sodium bisulfite	10140853	Sodium phosphate, dibasic
166774	Cyanogen chloride	7632000	Sodium nitrate	10192300	Ammonium bisulfite
166878	Ammonium carbonate	7645252	Lead arsenate	10196400	Ammonium sulfite
166987	Acetyl bromide	7646857	Zinc chloride	10261894	Sodium phosphate, tribasic
167495	sec-Butylamine	7647010	Hydrochloric acid	10280297	Cupric sulfate, ammoniated
168290	o-Dinitrobenzene	7647189	Antimony pentachloride	10415755	Mercurous nitrate
168685	tert-Butyl acetate	7647382	Phosphoric acid	10421484	Ferrie nitrate
169193	Granny acetate	7648393	Hydrofluoric acid	10588019	Ammonium bichromate
169261	Barium cyanide	7664417	Ammonia	11115745	Chromic acid
169308	Cadmium acetate	7664939	Sulfuric acid	12002038	Cupric acetoarsenite
169413	Cobaltous formate	7681494	Sodium fluoride	12054487	Nickel hydroxide
169447	m-Nitrophenol	7681523	Sodium hypochlorite	12125018	Ammonium fluoride
169711	Zinc cyanide	7697372	Nitric acid	12125029	Ammonium chloride
169746	Zinc acetate	7699458	Zinc bromide	12135781	Ammonium sulfide
169745	Zinc formate	7705080	Zinc chloride	12771083	Strontium chloride
169122	Ethion	7715549	Nickel chloride	13579794	Beryllium nitrate
173568	2,5-Dinitrophenol	7719123	Phosphorus trichloride	13748899	Zirconium chromate
176118	Calcium cyanide	7720787	Ferrous sulfate	13765190	Calcium chromate
192041	Mercuric cyanide	7722847	Potassium permanganate	13814865	Lead fluoride
192858	Mercuric thiocyanate	7723140	Phosphorus	13828403	Ammonium fluoroborate

13952846	sec-Butylamine
14017415	Cobaltous sulfamate
14216752	Nickel nitrate
14258492	Ammonium oxalate
14307358	Lithium chromate
14307438	Ammonium tartrate
14389775	Zinc ammonium chloride
14519996	Zinc ammonium chloride
14644612	Zirconium sulfate
15699180	Nickel ammonium sulfate
16721805	Sodium hydrosulfide
16871719	Zinc silicofluoride
16919190	Ammonium silicofluoride
16922958	Zirconium potassium fluoride
25154545	Dinitrobenzene
25154556	Nitrophenol
25155300	Sodium dodecylbenzenesulfonate
25187822	Trichlorophenol
25188154	2,4,5-T ester
25188287	2,4-D ester
25284082	Calcium
27118870	Dodecylbenzenesulfonic acid
27323417	Triethanolamine
27323417	dodecylbenzenesulfonate
27774126	Vanadyl sulfate
28300745	Antimony potassium tartrate
30525894	Paraformaldehyde
36478769	Uranium nitrate
37211055	Nickel chloride
42504461	Dodecylbenzenesulfonate isopropylamine
55262358	Zinc ammonium chloride
57401066	Calcium acetate
53467111	2,4-D ester
55438874	Ferric ammonium oxalate
61792072	2,4,5-T ester

(FR Doc. 78-6339 Filed 3-10-78; 8:45 am)

[6560-01]

(FRL 329-01)

PART 117—DETERMINATION OF REMOVABILITY OF HAZARDOUS SUBSTANCES

AGENCY: Environmental Protection Agency.

ACTION: Final rulemaking.

SUMMARY: This regulation establishes new rules for the determination of the removability of hazardous substances as required under a provision of the Federal Water Pollution Control Act. This regulation should be read in conjunction with other new regulations for hazardous substances which are also being promulgated today in this same separate part of the Federal Register, and which designate hazardous substances, harmful quantities, and rates of penalty.

EFFECTIVE DATE: June 12, 1978, except for vessels. For vessels the effective date is September 11, 1978.

FOR FURTHER INFORMATION CONTACT:

Kenneth M. Mackenthun, Director, Criteria and Standards Division (WH-555), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 (phone: 202-755-0100).

SUPPLEMENTARY INFORMATION: On December 30, 1975, a document

was published in the FEDERAL REGISTER (40 FR 59977) proposing to create a new part 117 in Title 40 of the Code of Federal Regulations. It was a proposed determination of actual removability under section 311(b)(2)(B)(i) of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) (the Act) for substances proposed as hazardous substances under Section 311(b)(2)(A) of the Act (40 FR 59981). At the same time, the designation of hazardous substances, determination of harmful quantities and determination of penalty rates were proposed as Parts 116, 118 and 119 respectively. Final promulgation of those regulations is concurrent with this rulemaking.

Interested persons were given until March 1, 1976 to submit written comments on all aspects of the proposed rules. Each of the comments received has been carefully considered in adopting the final rules which are promulgated at this time.

1. *Removability of oil-like substances.* A number of commenters expressed the opinion that certain of the proposed hazardous substances could actually be removed from the water after discharge. After reviewing the comments, physical-chemical data, and existing oil removal technology, it is agreed that some designated substances can actually be removed under most conditions of discharge. It is noted that these substances have limited water solubility, a relatively cohesive mass and are less dense than water. Thus, they resemble petroleum oils in their behavior when discharged to water. The substances can be described as those with specific gravities less than 1.0 and water solubility less than 1,000 mg/L. Accordingly, the final rule makes the determination that amyl acetate, ethylbenzene, xylene, alkyl chloride, benzene, cyclohexane, isoprene, methyl methacrylate, styrene, and toluene can actually be removed.

2. *Definition of removability.* Many comments dealing with the question of removability expressed alternative interpretations from that proposed by the Agency. The basic issue is that section 311(a)(8) defines the term removal or removal as follows: "8. Removal or removal" refers to removal of the oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare, including but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches."

It was recognized that for very substances it may be possible to take some action to minimize or mitigate damages to public health or welfare depending on the circumstances of the discharge. Thus, commenters argued that under this part of the definition

of removal or removal, all substances should be determined to be removable.

However, section 311(b)(2)(B)(i) requires a determination whether any designated substance can actually be removed (emphasis added). The Agency's proposal stated that this determination of actual removability was separable from the definition of removal or removal found in Section 311(a)(8) and referred only to the actual physical, chemical, or biological separation of the substance from the water.

With regard to the question of actual removability, the chemical, physical, or biological separation of a pollutant from the water or shorelines depends upon the hydrological characteristics of the receiving water at least as much as upon the properties of the substances. In general a substance when discharged to a contained water body of limited size often can actually be removed to some degree from that water body or shoreline. On the other hand, such substances when discharged to a large free flowing water body cannot, in general, be effectively separated from the water. Often it is the water body and other circumstances surrounding the discharge that dictate the success of attempts to actually remove the substance. However, section 311 requires that the determination of actual removability be made with respect to designated substances rather than receiving water bodies. In addition, section 311 also applies to discharges to the shorelines of the navigable waters. Discharges of designated substances which result in contaminated shorelines can nearly always be physically or chemically removed to some degree from the shoreline. Thus, for substances other than those identified as actually removable, there is no clear a priori determination of removability which will satisfy all potential discharge situations. In effect, many substances are only partially removable and therefore also partially nonremovable. As stated in the proposed rulemaking, the intent of section 311 and the implementing regulations is the prevention of discharges of hazardous substances. A determination that all substances are actually removable would negate the incentive for cleaner operation and more careful handling provided by the civil penalties in those circumstances where discharges, while subject to mitigation, cannot be actually removed. Therefore, the Agency has determined that the most satisfactory definition, and the one which best satisfies the congressional intent, is to define oil-like hazardous substances as actually removable, and to define other, less generally removable hazardous substances, as not actually removable. Such non-oil-like hazardous substances can on occasion be partially removed from the water or adjoin-

ing shorelines. On the whole, however, such substances will not in fact be removable and so are properly designated as "not actually removable." Since Congress has in essence defined oil as removable, it is logical to define substances with oil-like physical characteristics as removable.

As noted previously in the Preamble to this Part 117 some substances have been described as oil-like on the basis of similarity in behavior to oil when discharged to water, i.e., limited solubility, less dense than water, and relatively cohesive mass. The Act defines oil in narrative form but left to the Agency the responsibility for designating and therefore, defining hazardous substances. The Agency defined hazardous substances in Part 118 on the basis of toxicological effects. For Part 117 the Agency developed a rationale to distinguish between oils and oil-like hazardous substances. That rationale is as follows:

1. If the substance is petroleum derived and:

A. If it has a defined chemical structure, it is a candidate hazardous substance.

B. If the substance's chemical structure is not defined and if it contains both:

1. mixtures of isomers, and
2. Members of a homologous series, i.e., series of organic compounds with members differing from successive members by increments of CH₂, the substance is classified as a petroleum oil and is not covered by these regulations.

II. If the substance is non-petroleum derived and:

A. If it is not an organic solvent extractable, it is a candidate hazardous substance.

B. If it is organic solvent extractable and:

1. If it has a defined chemical structure, it is a candidate hazardous substance.

2. If the substance's chemical structure is not defined and if it contains both:

(a) mixtures of isomers, and
(b) member of a homologous series, the substance is covered by these regulations.

On the basis of the foregoing, the ten oil-like substances previously identified have been determined to be removable hazardous substances.

The proposed regulation, under §117.3, made the determination that discharges of substances that are not actually removable are nonetheless subject to damage mitigation actions taken under Section 311(c). Section 37 of the Clean Water Act (Pub. L. 95-217) provides (in new section 311(b)(2)(B)(v)) that the Administrator may act to mitigate the damage caused by discharges of nonremovable hazardous substances and that the

cost of such mitigation is to be deemed a cost incurred under Section 311(c) and thus recoverable from the responsible person under sections 311 (f) or (g).

3. Guidelines for Mitigation:

Several commenters addressed the need for guidelines on methods and procedures for removal or mitigation of discharges of hazardous substances. Section 311(b)(1)(A) requires the promulgation of removal regulations. These regulations will be developed in cooperation with the U.S. Coast Guard. Until such time as those regulations are promulgated, appropriate damage mitigation actions are those reasonable steps taken to contain, neutralize, and remove the substance or other actions to protect the public health or welfare. The general pattern of operational response action is specified in the National Oil and Hazardous Substances Contingency Plan (40 CFR 1510.40). To insure that such actions are appropriate, the response plan should be carried out in consultation with and approval of the On-Scene Coordinator as defined in 40 CFR 1510.38.

4. Definition of Mixture

It was suggested that the definition of mixture is too simplistic because it fails to recognize that the interactions of the two or more substances could produce a third substance more or less toxic than either of the substances being combined.

If two or more substances are chemically combined to form a non-hazardous substance, which is then discharged, there is no violation of section 311, but there may be violation of other sections of the Act or of other laws such as the Resource Conservation and Recovery Act. On the other hand if such substances combine to form a hazardous substance there is a violation of section 311. Further, if a hazardous substance is discharged followed by a discharge of another substance which renders the first substance harmless, the violation of section 311 caused by the first discharge is not obviated by the discharge of the second substance. However, mitigation efforts may be considered by the Administrator in determining which penalty to apply, as provided in Part 119.

Dated: March 3, 1978.

DOUGLAS M. COSTLE,
Administrator.

Part 117 is added as follows:

Sec.
117.1 Applicability.
117.2 Definitions.
117.3 Determination of actual removability.

AUTHORITY: Sec. 311 and 501(a), Federal Water Pollution Control Act, (33 U.S.C. 1251 et seq.).

§117.1 Applicability.

This regulation makes a determination under section 311(b)(2)(B)(i) of

the Federal Water Pollution Control Act (the Act) as to the actual removability of substances designated under section 311(b)(2)(A). This regulation applies to substances designated as hazardous under 40 CFR part 118.

§117.2 Definitions.

Terms used in this part shall have the meanings as stated in 40 CFR part 118 and as indicated below.

"Mixture" means any combination of two or more elements and/or compounds in solid, liquid or gaseous form except where such substances have undergone a chemical reaction so as to become inseparable by physical means. "Remove" or "removal" refers to removal of the oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches.

"Actually be removed" means the separation and isolation of discharged hazardous substances from the waters by chemical, physical, or biological means.

§117.3 Determination of actual removability.

It is determined that the following substances designated as hazardous under 40 CFR part 118 can actually be removed: Allyl chloride, amyl acetate, benzene, cyclohexane, ethylbenzene, isoprene, methyl methacrylate, styrene, toluene, xylene. All other elements, compounds or their structural isomers, or mixtures thereof designated as hazardous substances under 40 CFR part 118 are determined to be not actually removable. The determination that certain designated substances cannot actually be removed by chemical, physical, or biological means does not relieve the discharger or third party from damage mitigation liabilities under sections 311(f) and 311(g) of the Act.

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[6560-01]

[FRL 329-41]

PART 118—DETERMINATION OF HARMFUL QUANTITIES FOR HAZARDOUS SUBSTANCES

AGENCY: Environmental Protection Agency.

ACTION: Final rulemaking.

SUMMARY: This regulation establishes new rules for the determination of harmful quantities of hazardous substances, as required by a provision of the Federal Water Pollution

Control Act. This regulation should be read in conjunction with other regulations for hazardous substances, which are also being promulgated today in this same separate part of the Federal Register, and which designate hazardous substances, removability, and rates of penalty.

EFFECTIVE DATES: June 12, 1978, except for vessels. The effective date for vessels is September 11, 1978.

FOR FURTHER INFORMATION CONTACT:

Kenneth M. Mackenthun, Director, Criteria and Standards Division (WB-585), Office of Water and Hazardous Materials, U.S. Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460 (phone: 202-755-0100).

SUPPLEMENTARY INFORMATION: The Administrator of the Environmental Protection Agency proposed in the Federal Register of December 30, 1975 (40 FR 59982), to create a new part 118 in title 40 of the Code of Federal Regulations which made a determination of harmful quantities under section 311(b)(4) of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) (the Act), for substances designated under section 311(b)(2)(A) of that Act. At the same time the designation of hazardous substances, determination of actual removability, and establishment of units of measurement and penalty rates were also proposed as parts 116, 117, and 119 respectively. Final promulgation of those regulations is concurrent with this rulemaking.

Method for determining harmful quantities. The December 30, 1975, proposal (40 FR 59982-89) described a procedure developed for determining harmful quantities based on a hazardous material classification system found in Annex II of the International Conference on Maritime Pollution, 1973, which was submitted by the Intergovernmental Maritime Consultative Organization (IMCO) to member nations for adoption. The Agency indicated that a number of modifications to the basic IMCO system were required to satisfy the requirements of section 311. The modifications required were then used by the Agency in developing the table described at 40 FR 59988 as Table I, EPA Guidelines for Categorizing Hazardous Materials, which was to be used in conjunction with acute toxicity in determining harmful quantities.

Since the December 30, 1975, proposal, the Agency has reevaluated the use and appropriateness of the modified IMCO guidelines for categorizing hazardous substances. It was found that the IMCO guidelines and the proposed modifications to them required various subjective judgments, and relied, to some extent, on rather ill-defined ef-

fects such as biochemical oxygen demand, reduction of amenities, and the tainting of seafood. Further, these effects were not utilized in the proposed determination of harmful quantities. Therefore, this final rulemaking simplifies the categorization process to employ only the acute aquatic toxicity of the designated substances in deriving the harmful quantity categories. A result of this simplification is that substances for which no acute toxicity data are available are not categorized.

As explained in the preamble to part 116 published elsewhere in this issue of the Federal Register, only two substances, adiponitrile and acetone cyanohydrin were proposed solely because of toxicological effects other than aquatic. Since that time, aquatic toxicity data for acetone cyanohydrin which support its final designation have become available. No similar supporting data for adiponitrile have become available and this substance was deleted from the final listing of hazardous substances. Although not used in the present rulemaking action, part 116 adopts selection criteria dealing with acute toxic effects to mammals and plants. At such time that those or other selection criteria are utilized for the designation of hazardous substances, this simplified system for categorizing substances according to their relative potential for harm will be supplemented.

Toxicological data for individual substances used in determining harmful quantities were derived from the compendium of information fact sheets entitled, Hazardous Substances Facts Sheets, 1977, which are available from the Environmental Protection Agency. In addition, other primary sources of data were: Water Quality Criteria Federal Water Pollution Control Administration, 1968; Water Quality Criteria 1972, EPA, March 1973, and quality Criteria for Water, EPA 440/9-76-023, July 1976.

Comments. Interested persons were given until March 1, 1978, to submit written comments concerning all aspects of the proposed rules. Each of the comments received has been carefully considered in adopting the final rules which are promulgated at this time.

Special waters. Many comment letters addressed the definition of Special Waters and the proposed determination that any quantity of a designated substance discharged to these waters constituted a harmful quantity. A majority of those commenting on this point believed the proposal lacked adequate definition or justification and would not result in a workable approach.

Special waters were proposed to be defined as those waters which are: (1) Drinking water reservoirs; (2) part of a designated National Wildlife Refuge

System; or part of a designated National Forest Wilderness, a designated National Park System, or a designated National Wilderness Preserve System.

It was argued that the term "any quantity" was vague, and that the criminal nature of penalties for failure to notify demanded a definitive measure of a violation. It was also pointed out that the boundaries of waters proposed as special waters were neither clearly defined nor marked in such a way that the person responsible for giving notice could instantly recognize or differentiate between various waters. Thus, this lack of definition placed an additional and unfair burden on potential dischargers. It was further argued that the proposed harmful quantities were of such a magnitude that they provided an adequate level of protection for all waters.

On the other hand, several commenters suggested that the definition of "special waters" should be expanded to include State and locally defined parks and wildlife areas, tributaries to National wildlife refuges, forests, wildernesses and parks, and sources of drinking water in addition to reservoirs.

After review of the practical and legal implications of the proposed approach, the Agency is in agreement with the position that because of the criminal nature of the penalties for failure to provide notice under section 311(b)(5), the lack of easily discernible marked boundaries for special waters makes the proposed approach impractical. The Agency further believes that the magnitude of quantities proposed as harmful and adopted by this rulemaking provide meaningful protection to those waters proposed as "special waters." Accordingly, the proposed provision concerning discharge of hazardous substances into special waters is deleted from this final rule.

2. Demonstrable harm. Many comment letters expressed the opinion that the proposed harmful quantities and the method for their derivation were inappropriate. It was suggested that the harmful quantity should be directly related to actual harm or demonstrable damage to the environment from each discharge. It was argued that the concentration of a toxic material in the water dictated whether or not damages or harm would occur. Thus, the characteristics of the receiving water body including type, size, and flow rate, all influence the toxicity and must be considered in the derivation of the harmful quantity. Other commenters argued that salinity, hardness, temperature, and biological populations of the water body further modify the actual impact of a hazardous substance discharge and should be considered.

Section 311(b)(4) requires that the determination of harmful quantities

be made by regulation in advance of any specific discharge situation. It is recognized that the degree of harm to environmental health is dependent primarily upon the concentration of the substance in the receiving water and that the pollutant concentration is dictated in large part by the type, flow rate, and size of the water body. It is further recognized that the ultimate degree of harm or damage is also a function of many other characteristics of receiving water bodies such as salinity, hardness, alkalinity, dissolved oxygen, turbidity, biological population, buffering capacity, and beneficial uses. Recognition of the numerous factors which influence the ultimate expression of harm or damages resulting from the discharge of a hazardous substance would preclude a before-the-fact quantitative evaluation of harm. The number of potentially influencing factors and their possible combinations would render any predictive model based on them entirely too cumbersome for regulatory application.

Similar to the problems discussed under the special waters provision, the boundaries and differentiation of various waters are not clearly defined nor readily discernible. The discharger, particularly from a transportable source, is not equipped to differentiate between large and small streams, estuaries and rivers, or rivers and lakes. Adoption of such an approach using variable harmful quantities depending on water body type or size would place dischargers in the position of facing criminal penalties for failure to immediately notify without having the means to make the determination that a violation has occurred. As pointed out by the numerous comments on the proposed special waters provision, such a nondefinitive determination would place an unfair burden on dischargers. The proposed approach, identifying a single harmful quantity applicable to all waters, provides a clear and definitive threshold for activation of the reporting requirement. The inclusion of numerous variables which may accompany a particular discharge and modify the harmful quantity would create uncertainty in the notification requirement which is unacceptable in light of the criminal penalty provisions for failure to give notice and the importance of prompt activation of response activities through such notice. The proposed approach adopted by this rulemaking is responsive to the requirements of the Act and the harmful quantity is defined in terms of the unit of measurement concept and the relative degree of hazard presented by each chemical. Because the determination must be made a priori, no individualized assessment of harm or damage is feasible.

The Clean Water Act of 1977 (Pub. L. 95-217) contained a number of

amendments to section 311 of the Federal Water Pollution Control Act including, as noted in the preamble to Part 118, amendments extending the coverage of section 311 out beyond the contiguous zone. In the debates on the conference report concerning these amendments Senator Muskie stated:

The amendments to section 311 underscore the importance of this section and the need for completion of long-delayed regulatory action with respect to hazardous substances and determination of removability, harmful quantities and rates of penalty are major actions. The Administrator is expected only to make a reasonable effort to make these judgments. These are nationally applicable, before-the-fact decisions and are not expected to reflect the myriad of actual circumstances that may occur. (Congressional Record at S19653 (December 15, 1977)).

This statement illustrates the principle that harmful quantity determinations, as well as designation of substances as hazardous and determinations of removability and rates of penalty, are to be based on the characteristics of the substance and not on the circumstances surrounding the discharge. Although discharges of the same substance to different bodies of water may result in different degrees of environmental harm, it is neither required by the statute nor practical to establish varying harmful quantities. In this connection it is significant that the Clean Water Act of 1977 amended section 311(b)(4) to delete the provision establishing a different test for a harmful quantity of oil in the contiguous zone than for other waters. As Senator Muskie's statement demonstrates, Congress was aware that requiring tailoring of such determinations to water body type and other circumstances is administratively unwise and could prevent achievement of the goals of the Act.

The question as to how EPA should implement the extension of the coverage of section 311 is really only a subset of the issue discussed above. The decision, arrived at with full public participation, to adopt uniform harmful quantities (and designations, determinations of removability, and rates of penalty) provides the answer. Moreover, nothing in the Clean Water Act of 1977 or its legislative history indicates that the extended coverage of section 311 was to be implemented differently in this respect than in other waters. In fact, as noted above, the contrary appears to be true. Thus, it is fully appropriate that the same provisions of Parts 116, 117, 118, and 119 which apply to other waters, also apply beyond the contiguous zone.

3. *Time of discharge.* Many comment letters addressed the fact that a discrete period of time was not proposed or associated with the determination of harmful quantity. The majority of

comments on this point expressed the opinion that the harmful quantities had little meaning unless a time period for discharge of the quantity was specified. It was argued that the discharge of 2 pounds of a category A substance over a time period of 2 months would cause significantly less environmental impact than the discharge of the same amount over a time period of 2 minutes. A number of the commenters suggested specific time periods to be associated with the harmful quantity. Suggested limits ranged from 5 minutes to one month.

Neither section 311 of the Act nor its legislative history limit the applicability of section 311 to spill-type discharges of hazardous substances. Thus, implementing regulations under section 311 may be applied to any discharge over any length of time. However, the primary thrust of these regulations has been directed toward the control of short-term nonroutine discharges of hazardous substances. The association of a maximum time limit over which the discharge of a harmful quantity must occur to result in a violation will provide additional definition to the reporting requirement under section 311(b)(3). For the purpose of setting a maximum time limit over which the discharge of a harmful quantity has been established as 24 hours. It is believed that this time period will permit regulatory control over such discharges of hazardous substances and provide an additional degree of resolution to the reporting requirement. It is noted that a 24 hour average or maximum discharge limit is the shortest time period specified in typical NPDES permits or associated reporting and monitoring requirements.

4. *Changes in harmful quantity categories.* Several comment letters addressed the categorization of certain specific substances suggesting that new or existing data justified alternative categories. These petitions were made, in some cases, on the basis of data selectively quoted from information utilized by the Environmental Protection Agency in deriving the proposed categorization. In other cases, additional data were submitted by commenters to support their argument. A review of all proposed harmful quantities was also suggested.

In each case, the specific information utilized by the Agency in arriving at a harmful quantity category was carefully reviewed against the new data submitted. In addition, all remaining harmful quantity categories were reviewed by the Agency. As a result of this thorough review of the harmful quantity categories, category changes have been made.

Changes in harmful quantity categories were made for about 80 substances as a result of this review with changes

from categories of higher relative toxicity to less toxic categories approximately equal to changes in the opposite direction. In terms of the direction of change, most of the changes are in agreement with suggestions from commenters. The exception usually was in cases where a commenter without benefit of supporting data requested that a material be moved from one category to a less harmful category or be removed from the list. For further information see the *Hazardous Substances Fact Sheet*, 1977.

5. *Consideration of bioaccumulation.* Several commenters suggested that the consideration of bioaccumulation could be clarified by use of more quantitative criteria for assessing the magnitude of accumulation.

The simplification of the categorization process explained earlier in the preamble discontinued the consideration of bioaccumulation. However, it is anticipated that future criteria may employ the assessment of bioaccumulation and to the extent possible that assessment will include quantitative evaluation of the effects of bioaccumulation.

6. *Magnitude of Harmful Quantities:* Numerous commenters expressed the view that the proposed harmful quantities were generally too low. Related to this some commenters pointed out an inequity in a harmful quantity category system that provides for a factor of ten difference between categories D and C, C and B, and B and A while permitting Category A to range over more than three orders of magnitude. Note Table II below from the December 30, 1975 proposal (40 FR 59889).

Category	Representative range	Harmful quantity pounds (kilograms)
A	LC50 < 1 mg/l	1.0 (0.454)
B	1 mg/10LC50 < 10 mg/l	10 (4.54)
C	10 mg/10LC50 < 100 mg/l	100 (45.4)
D	100 mg/10LC50 < 1000 mg/l	500 (227)

The Agency has, on the basis of the above comments, reevaluated the harmful quantity categories as well as each of the suggested alternatives. In doing so, rates of penalties for Category A substances were compared as a function of acute toxicities. Endrin, for example, with an acute toxicity of 0.000037 mg/l would incur a penalty of \$560 a pound. On the other hand, cupric chloride with an acute toxicity of 0.91 mg/l (about one twenty five thousandth that of Endrin) would incur a penalty of \$62 per pound, or almost 17 percent of that for the other highly toxic substance. The Agency agrees with the concern about inequity in the A category and is therefore adding another category, the details of which are described below.

Several alternatives were proposed by commenters for modifying the

harmful quantity system. The most practical of those and the one which has been accepted is to add a new category before Category A which we shall call Category X, in which substances with LC50 values of less than 0.1 mg/l are included, and to designate for this Category X the basic unit of one pound as the harmful quantity. The designated harmful quantities for Categories A, B, C, and D are then changed to 10, 100, 1,000 and 5,000 pounds respectively. Category A then retains only the acute toxicity range 0.1 LC50-1 ppm. Categories B, C, and D retain their LC50 ranges as proposed. The modified harmful quantity system is shown in table below:

Category	Toxicity range	Harmful quantity pounds (kilograms)
X	LC50 < 0.1 mg/l	1.0 (0.454)
A	0.1 mg/10LC50 < 1 mg/l	10 (4.54)
B	1 mg/10LC50 < 10 mg/l	100 (45.4)
C	10 mg/10LC50 < 100 mg/l	1,000 (454)
D	100 mg/10LC50 < 1000 mg/l	5,000 (2,270)

As mentioned earlier in this preamble and illustrated by the above table, the system for categorization has been simplified and is based solely on the ranges of aquatic toxicity. The overall effect of adding the additional Category X is that the harmful quantities proposed on December 30, 1975, have been increased. Due to the few data on recorded discharges, it is not possible to estimate the effect this change will have on the number of discharges exceeding the harmful quantity. Inactively, it would appear that fewer discharges would exceed the present harmful quantity than those quantities proposed earlier. However, because these regulations generally apply to discharges which are the result of episodic events such as transportation and storage accidents and plant upsets, it is believed that the harmful quantities adopted by this Part 118 will regulate the bulk of those discharges which present an imminent and substantial threat to public health and welfare and the environment.

7. *Applicability:* A. Many comment letters expressed the opinion that the Applicability section proposed as Part 118.1 was inappropriate as it related to the section 402 National Pollutant Discharge Elimination System (NPDES) program. Most commenters believed that any association of section 311 regulations with an effluent discharge regulated under the NPDES program was redundant and exceeded the statutory authority of section 311. The primary alternative suggestion was that all holders of an NPDES permit be totally exempt from the provisions of section 311. The stated basis for

this position was that violations of the NPDES permit are enforceable in their own right under section 309 and that additional reporting and enforcement provisions under section 311 were redundant, unnecessary, and burdensome. It was further argued that section 311 of the Act applied only to spills from sources other than an NPDES permitted facility.

As stated under the discussion of the "Time of Discharge," above, nothing in the Act limits the applicability of section 311 only to "spill-type" situations. However, the stated thrust and primary emphasis in these initial regulations (40 CFR Parts 116, 117, 118, and 119) is the control of spill-type or nonroutine discharge episodes. This policy of addressing such discharges as the priority area of concern does not preclude the application of section 311 to other discharges of hazardous substances. Section 311 provides important authorities and authorizes requirements not all of which are found in other sections of the Act. These include: (1) immediate notification in the event of a discharge (section 311(b)(5)); (2) an organized Federal government plan to deal with pollution emergencies (section 311(c)(2)); (3) authority of the Federal government to respond to pollution emergencies and take actions to protect public health and welfare and the environment (section 311(c)(1)); (4) an established fund to support pollution emergency activities (section 311(k)); (5) responsible party liabilities for cleanup costs incurred by the Federal Government (sections 311(f) and (g)); and (6) removal and discharge prevention regulations (section 311(i)). The intent of the proposed applicability section was to clearly exclude discharges of hazardous substances which are permitted under other sections of the Act and related laws from the provisions of these regulations. Although violations of such other requirements may be enforced independently, no emergency response activities and the accompanying protection of public health such as those mentioned above are authorized. Therefore, discharges in violation of such requirements are in violation of section 311 as well.

The 24-hour discharge of a designated hazardous substance in a quantity equal to or exceeding its harmful quantity and in excess of the limitation in an NPDES permit issued pursuant to section 402 of the Act is a violation of these rules.

b. Some commenters pointed out that a discharger may not know for several days (the period required to do testing) whether his discharges violate his NPDES permit.

The requirement to provide notification arises when the discharger learns or should have known that he has made a discharge in a harmful quantity in violation of section 311(b)(4).

One comment letter pointed out that the State of California, under State statutory authority, issues permits for the application of calcium oxide to help beds for the control of sea urchins. Because the applicability section of the proposed rules did not specifically exclude such discharges, there was concern that continued use of calcium oxide in California waters may constitute a violation of section 311.

The beneficial uses of substances designated as hazardous in Part 116 have been recognized by the exclusion of certain activities permitted under Federal law. The benefits of calcium oxide addition to waters containing commercial kelp beds are also recognized and the applicability section of this final rule is amended to exclude discharges permitted under §163.7 of Title 14 of the California Administrative Code. A similar modification is made in 40 CFR Part 118.1.

2. In regard to the exclusion from applicability for activities permitted under section 404 of the Act or section 103 of the Marine Protection, Research and Sanctuaries Act of 1972, it was pointed out that permits are not issued for Congressionally authorized projects. Accordingly, it was suggested that the language be changed to reflect compliance with the sections of law rather than the specific permit. The suggested alternative is adopted in this final rulemaking.

Several commenters questioned the Federal regulations pertaining to safe drinking water, (4) pursuant to the label directions for application of a pesticide product registered under 40 CFR Part 162 (FEDERAL REGISTER, Vol. 40, No. 129, Part II, pp. 23242-23238, July 3, 1975) by authority of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended by the Federal Environmental Pesticide Control Act of 1972 (Pub. L. 92-515, 86 Stat. 973; Pub. L. 94-140, 88 Stat. 731; 7 U.S.C. 136 et seq.), (5) in compliance with the regulations issued under section 3004 of the Resource Conservation and Recovery Act, 90 Stat. 2795; 42 U.S.C. 6901, (6) in compliance with instructions of the On-Scene Coordinator pursuant to 40 CFR 1510 (the National Oil and Hazardous Substance Contingency Plan) or 33 CFR 153.105(c) (Pollution by Oil and Hazardous Substances), or in accordance with applicable section 311(Q)(X)(A) regulations, when promulgated, do not violate section 311.

Dated: March 3, 1978.

Douglas M. Costle,
Administrator.

Part 118 is added as follows:

- Sec.
118.1 Applicability.
118.2 Abbreviations.
118.3 Definitions.
118.4 Determination of Harmful Quantities.
118.5 Demonstration Projects.
118.6 Notice.
118.7 Penalties.
118.8 Landfills.
- ARTICLE II, Secs. 311 and 501(a), Federal Water Pollution Control Act (33 U.S.C. 1251 et seq., (the Act)) and Executive Order 11735.

§118.1 Applicability.

This regulation makes a determination of the harmful quantity for each substance designated as hazardous in 40 CFR Part 118. The regulation applies to quantities of designated substances equal to or greater than those set forth below, except to the extent that the owner or operator can show such discharges are made (1) in compliance with the requirements of sections 301, 302, 303, 306, 307, 318 and 403 of the Act, and in compliance with a National Pollutant Discharge Elimination System (NPDES) permit which has been issued pursuant to section 402 of the Act, (2) in compliance with Section 404 of the Act or in compliance with a permit issued under the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1401 et seq.), (3) in compliance with approved water treatment plant operations as specified by local, State or Federal regulations pertaining to safe drinking water, (4) pursuant to the label directions for application of a pesticide product registered under 40 CFR Part 162 (FEDERAL REGISTER, Vol. 40, No. 129, Part II, pp. 23242-23238, July 3, 1975) by authority of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended by the Federal Environmental Pesticide Control Act of 1972 (Pub. L. 92-515, 86 Stat. 973; Pub. L. 94-140, 88 Stat. 731; 7 U.S.C. 136 et seq.), (5) in compliance with the regulations issued under section 3004 of the Resource Conservation and Recovery Act, 90 Stat. 2795; 42 U.S.C. 6901, (6) in compliance with instructions of the On-Scene Coordinator pursuant to 40 CFR 1510 (the National Oil and Hazardous Substance Contingency Plan) or 33 CFR 153.105(c) (Pollution by Oil and Hazardous Substances), or in accordance with applicable section 311(Q)(X)(A) regulations, when promulgated, do not violate section 311.

or less than the maximum daily amount expressly allowed in such permit, or is equal to or less than the average daily discharge for a hazardous substance not limited expressly in the permit, but as disclosed in the permit application.

§118.2 Abbreviations.

lb equals pound.
kg equals kilogram.
HQ equals harmful quantity.

§118.3 Definitions.

As used in this part, all terms shall have the meanings stated in 40 CFR Parts 116 and 117.

§118.4 Determination of harmful quantities.

The quantity listed with each substance in Table 118.4 is determined to be the harmful quantity for that substance. The harmful quantities of mixtures or solutions are considered additive based upon the proportions of the individual elements or compounds as follows: For a mixture or solution of substance X, substance Y, and substance Z, etc., the weight of substance X discharged is divided by the harmful quantity of pure substance X, and the fractions so derived are added. If the total equals or exceeds unity, then the harmful quantity of the mixture or solution has been equaled or exceeded.

TABLE 118.4—HARMFUL QUANTITIES OF HAZARDOUS SUBSTANCES

Note.—The first number under the column headed "HQ" is the harmful quantity in pounds. The number in parentheses is the metric equivalent in kilograms. The column headed "Category" lists the EPA Category associated with each substance.

Material	Category	HQ in pounds (kilograms)
Acealdehyde	A	1,000 (454)
Acetic acid	A	1,000 (454)
Acetic anhydride	A	1,000 (454)
Acetone cyanohydrin	A	10 (4.5)
Acetyl bromide	A	5,000 (2,270)
Acetyl chloride	A	10 (4.5)
Acrylonitrile	B	100 (45.4)
Adipic acid	B	10 (4.5)
Allyl alcohol	B	100 (45.4)
Allyl isocyanate	B	1,000 (454)
Ammonium sulfide	B	5,000 (2,270)
Ammonia	B	5,000 (2,270)
Ammonium acetate	C	5,000 (2,270)
Ammonium benzoate	C	5,000 (2,270)
Ammonium bicarbonate	C	5,000 (2,270)
Ammonium butyrate	C	5,000 (2,270)
Ammonium chloride	C	5,000 (2,270)
Ammonium carbonate	C	5,000 (2,270)
Ammonium cyanide	C	5,000 (2,270)
Ammonium chromate	C	1,000 (454)
Ammonium citrate	C	5,000 (2,270)
Ammonium fluoride	C	5,000 (2,270)
Ammonium formate	C	5,000 (2,270)
Ammonium hydrosulfide	C	5,000 (2,270)
Ammonium hydroxide	C	5,000 (2,270)
Ammonium isocyanate	C	1,000 (454)

ous substance from such vessel or facility in quantities equal to or exceeding in any 24-hour period the harmful quantity determined by this Part, immediately notify the appropriate agency of the United States Government of such discharge. Notice shall be given in accordance with such procedures as the Secretary of Transportation has set forth in 33 CFR Part 153.

§ 118.7 Penalties.

(a) Any person in charge of a vessel or an onshore or offshore facility who fails to notify immediately the United States Government of discharges of hazardous substances designated in 40 CFR Part 118 equal to or exceeding in any 24-hour period those quantities determined to be harmful as set forth in this Part (except in the case of a discharge beyond the contiguous zone, a person in charge of a vessel not otherwise subject to the jurisdiction of the United States) shall be subject to not more than \$10,000 or imprisonment for not more than one year or both pursuant to section 311(f)(3).

(b) The owner or operator of a vessel or onshore or offshore facility from which is discharged a hazardous substance designated in 40 CFR Part 118 in a quantity equal to or exceeding in any 24-hour period the harmful quantity established in this Part (except in the case of a discharge beyond the contiguous zone, a person in charge of a vessel not otherwise subject to the jurisdiction of the United States) shall be assessed a civil penalty of up to \$5,000 under section 311(b)(6).

(c) The owner or operator of a vessel or onshore or offshore facility from which is discharged a hazardous substance designated in 40 CFR Part 118, shall be subject to the defenses to liability provided in section 311(f), be subject to a civil penalty assessed under Section 311(b)(2)(B)(iii) as set forth in 40 CFR Part 119, provided that such hazardous substance shall have been determined in 40 CFR Part 117, not to be actually removable, and provided further that the quantity of such hazardous substance discharged equals or exceeds in any 24-hour period the harmful quantity established in this Part.

§ 118.3 Liabilities for removal.

In any case where a substance designated as hazardous in 40 CFR Part 118 is discharged from any vessel or onshore or offshore facility in a quantity equal to or exceeding the harmful quantity determined by this Part, the party or parties liable pursuant to sections 311(f) and (g) of the Act shall be liable to the United States Government for the actual costs incurred in the removal of such substance, subject only to the defenses and monetary limitations enumerated in sections

311(f) and (g) of the Act. Removal refers to removal of the hazardous substance from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare, including, but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches.

(PR Doc. 78-6341 Filed 3-10-78; 8:45 am)

[6560-01]

(PR 329-51)

PART 119—DETERMINATION OF UNITS OF MEASUREMENT, AND RATES OF PENALTY FOR HAZARDOUS SUBSTANCES

AGENCY: Environmental Protection Agency.

ACTION: Final rulemaking.

SUMMARY: This regulation establishes new rules which set forth the methods and procedures for determining and assessing civil penalties for the discharge of hazardous substances in harmful quantities in violation of Section 311 of the Federal Water Pollution Control Act. It also includes units of measurement and rates of penalty for particular substances which may be utilized as the basis for computing the penalty. This regulation should be read in conjunction with other regulations which are also being promulgated today in this same separate part of the FEDERAL REGISTER, and which designate hazardous substances, removability, and harmful quantities, respectively.

EFFECTIVE DATES: June 12, 1978, except for vessels. For vessels the effective date is September 11, 1978.

FOR FURTHER INFORMATION CONTACT:

Kenneth M. Mackenthun, Director, Criteria and Standards Division (WE-385), Office of Water and Hazardous Materials, U.S. Environmental Protection Agency, 401 M Street SW., Washington, D.C. 20460, phone: 202-755-0100.

SUPPLEMENTARY INFORMATION: On December 30, 1973, the Administrator of the Environmental Protection Agency proposed in the FEDERAL REGISTER (40 FR 59999) to create a new Part 119 in Title 40 of the Code of Federal Regulations. In that publication, units of measurement and rates of penalty for hazardous substances as required under section 311(b)(2)(B)(iv) of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), (the Act) were proposed. At the same time the designation of hazardous substances, determination of actual re-

movability, and determination of harmful quantities were proposed as Parts 116, 117, and 118 respectively. Final promulgation of those regulations is concurrent with this rulemaking.

Interested persons were given until March 1, 1975, to submit written comments on all aspects of the proposed rules. More than a third of all comment letters addressed some aspects of penalty assessment. Each of those comments has been carefully considered in adopting the rules which are promulgated at this time. Those areas of substantive comment are discussed below, following a general statement concerning the content of the regulations.

A. PRINCIPAL FEATURES OF THE REGULATIONS

1. UNIT OF DISCHARGE AND PENALTY RATE

Section 311(b)(2)(B)(iii) of the Act subjects the owner or operator of any vessel, onshore facility, or offshore facility from which there is discharged any hazardous substance which has been determined to be not actually removable (see 40 CFR Part 117) to either of two alternative civil penalties. The first, under subsection (aa) thereof, is to be based on the toxicity, degradability, and dispersal characteristics of the substance and a not to exceed \$5,000. The second, under subsection (bb) thereof, is determined by the number of units discharged multiplied by the rate of penalty under section 311(b)(2)(B)(iv) of the Act, as implemented in section 119.5 of this Part, and may be up to \$5 million in the case of a discharge from a vessel and \$500,000 in the case of a discharge from an onshore or offshore facility.

Section 119.4 of these regulations enumerates the factors to be considered in selection of the penalty provision. In the section as proposed on December 30, 1973, the discriminator between the two sections was gross negligence. Because of the difficulty of proving gross negligence, and the absence of such a discriminator in the applicable statutory language, a number of commenters were critical of the Agency's adoption of this standard. In response to the suggestions of these commenters, the Agency has reconsidered its position, and in the regulations promulgated at this time has adopted a discriminator based on the gravity of the offense. The factors which must be considered by the Regional Administrator in selecting a penalty include the size of the discharge, the culpability of the owner, the extent of any mitigation or clean-up efforts, and any other factors which he finds relevant under the circumstances. It should be noted that the choice of penalty as provided in the Act is in the discretion of the Administrator.

Generally those commenters who advocated use of the gross negligence discriminator also expressed concern with the proposed harmful quantity categorization system. As described in the preamble to Part 118 the Agency, after extensive review and analysis, has now revised that system by adding another category for the most acutely toxic substances.

With respect to the penalty rates to be established under section 311(b)(2)(B)(iii)(bb), the Act provides as follows in section 311(b)(2)(B)(iv):

The Administrator shall establish by regulation, for each hazardous substance designated under subparagraph (A) of this paragraph, and within 180 days of the date of such designation, a unit of measurement based upon the usual trade practice and, for the purpose of determining the penalty under clause (iii)(bb) of this subparagraph, shall establish for each such unit a fixed monetary amount which shall be not less than \$100 nor more than \$1,000 per unit. He shall establish such fixed amount based on the toxicity, degradability, and dispersal characteristics of the substance.

As more fully set forth in the preamble to Part 118 which is being promulgated concurrently with this regulation, the method selected for determination of harmful quantities involves the ranking of hazardous substances on the basis of acute toxicity. Substances are divided into five categories on the basis of their relative toxicity, a fifth category having been added after review and consideration by the Agency of public comment on the proposed harmful quantity rulemaking. The smallest common commercial container size was then defined as the harmful quantity for the most toxic category. Other categories were thereafter assigned harmful quantities on a proportional basis but at higher values than proposed.

Several commenters expressed the opinion that potential penalties from some spills would be unduly excessive with relatively small spills resulting in nearly maximum possible penalties. One example calculated by a commenter indicated that the spill of a single truck load of copper sulfate, a Category B substance with a median dispersion factor, could result in a penalty of nearly \$2.5 million. In another example it was noted that the rupture of a transfer line from a bulk terminal to a vessel being loaded with cresol, a Category B substance with a slightly higher dispersion factor than copper sulfate, could result in the discharge of 12,000 pounds in one minute and a resultant penalty of nearly \$1 million.

Both the proposed harmful quantity and rate of penalty structures have been reviewed extensively by the Agency. Each has been modified to permit the application of penalties in a more reasonable manner that is uniform in proportionality from the most acutely toxic to the least acutely toxic

of the designated substances. The modification to the rate of penalty table resulted from the modification of the harmful quantity table as described in the Preamble to Part 118. Its effect was to reduce by a factor of 10 the penalties for substances in the 1 to 500 mg/L LC50 range. The new harmful quantity and rate of penalty schedules are set forth in Tables I and 4 below.

With respect to mixtures of more than one hazardous substance, for the reasons set forth in the preamble to the Agency's December 30, 1975, proposal of this Part, 40 FR at 60000, rates of penalty will be the sum of the rates which would be assessed for each individual component of the mixture. Also in response to comment on that proposal, for discharges of a mixture in which the weights of the individual components are not known a penalty will be assessed for the discharge based on the harmful quantity and penalty rate for the most toxic component of the mixture. For solutions, the penalties assessed will be based on the content of hazardous substances. No penalties will be assessed for materials recovered unreleased from their integral containers. Resources expended on the development of containers that prevent discharges promote the objective of section 311 more so than resources expended on penalties of insurance.

A vital element of section 311(b)(2)(B)(iv) is the selection of the unit of measurement. As noted in the preamble to the December 1975, proposal, Agency studies involving industry and trade associations did not reveal such a unit to be universally common to trade practice. A common unit of measurement for the manufacturer is frequently different from that employed by the user of the same material. Furthermore, price quotations show a variety of commercial units for the same chemical. Transporters of chemicals frequently employ units different from those of either manufacturer or user. Still further variations are seen depending on the mode of transport.

In summary, the finding of the Agency is that the only generally common unit of measure is a weight unit, the pound. No compelling evidence was presented in the public comment for departing from this approach. Multiples of this basic unit are utilized throughout the chemical and transportation industries, but no single multiple of the basic pound unit can be found to be representative of the usual trade practice for any chemical. The penalties using these common units of measure shall be based on the toxicity and the dispersal characteristics of the substance (section 311(b)(2)(B)(iv)) with the latter ranked in order of relative potential

harm to the public health or welfare in the event of a discharge. The feature in common is the potential capacity of the substance to cause environmental damage. Therefore, the minimum quantity of each material causing probable harm can be thought of as a common unit. Thus the weight corresponding to the smallest common commercial container size, one pound (0.454 kilogram), previously adopted as the "harmful quantity" for materials in the most toxic EPA harmful quantity category, has also been adopted as the "unit of measurement" for materials in the next most toxic category, Category I, and assigned a base penalty rate of \$1,000 per unit. Other categories are assigned larger units of measurement which are finite multiples of the basic one pound unit. The aquatic toxicity ranges for physical/chemical/dispersal properties in various ways. The relative harm these categories pose to the environment was then ranked. The terms involved and final relative ranking of physical/chemical/dispersal categories, in increasing order of relative damage potential, are shown in Table II and the physical/chemical/dispersal (P/C/D) factor of each substance is also indicated in Table 119.3.

TABLE I.—UNITS OF MEASUREMENT

Category	Unit of measurement (lb/kg)	Toxicity range
X	1 (0.454)	LC50 < 0.1 mg/L
A	10 (4.54)	0.1 mg/LC50 < 1 mg/L
B	100 (45.4)	1 mg/LC50 < 10 mg/L
C	1,000 (454)	10 mg/LC50 < 100 mg/L
D	1,000 (2270)	100 mg/LC50 > 100 mg/L

The system adopted recognizes that not all substances within a category exert their damaging effects equally. The law requires that the penalty range between \$100 and \$1,000 p unit of measurement. For each category the upper penalty limit is modified by physical/chemical adjustment factors which in addition reflect the substance's ability to disperse.

The adjustment factor (0.1 to 1.0) arises from a second profiling operation based on the solubility, density, volatility, and associated propensity for dispersal in water of each hazardous substance. Each substance has been placed in one of eight categories combining these physical/chemical/dispersal properties in various ways. The relative harm these categories pose to the environment was then ranked. The terms involved and final relative ranking of physical/chemical/dispersal categories, in increasing order of relative damage potential, are shown in Table II and the physical/chemical/dispersal (P/C/D) factor of each substance is also indicated in Table 119.3.

TABLE II.—PHYSICAL/CHEMICAL/DISPERSAL (P/C/D) ADJUSTMENT FACTORS

Material classification	P/C/D Rank category	P/C/D factor
Innocuous Toxicity Phosm—TYP	1	0.10
Innocuous Nonvolatile Phosm—NTP	2	2.2

TABLE II.—PHYSICAL/CHEMICAL/DEGRADABLE (P/C/D)-ADJUSTMENT FACTORS—Continued

Material classification	P/C/D Rank	P/C/D factor
Insoluble Sinker	IS	3 .36
Soluble Mixer	SM	4 .49
Precipitator	P	5 .53
Soluble Sinker	SS	6 .75
Soluble Floater	SP	7 .36
Miscible	M	8 1.0

LEGEND

ITP—insoluble volatile floater—materials lighter than water with a vapor pressure greater than 10 mm Hg and a solubility of less than 1,000 ppm (weight per weight basis) or materials with vapor pressure greater than 100 mm Hg and solubility less than 10,000 ppm.

INF—insoluble nonvolatile floater—materials heavier than water with a vapor pressure greater than 10 mm Hg and a solubility

of less than 1,000 ppm (weight per weight basis).

IS—(insoluble sinker)—materials heavier than water and of solubility less than 1,000 ppm (weight per weight basis).

SM—(soluble mixer)—solid substances which have a solubility greater than 1,000 grams of solute per 1,000 grams of water.

P—(precipitator)—salts which dissociate or hydrolyze in water with subsequent precipitation of a toxic ion.

SS—(soluble sinker)—materials heavier than water and of solubility greater than 1,000 ppm (weight per weight basis).

SP—(soluble floater)—materials lighter than water and of a solubility greater than 1,000 ppm (weight per weight basis).

M—(miscible)—liquid substances which can freely mix with water in any proportion.

In summary, the adjusted rates of penalty, arising from possible combinations of toxic category and P/C/D factor are set forth in Table III below.

TABLE III.—Rates of penalty
(in dollars per unit of measurement)

Category	P/C/D classes						
	ITP	INF	IS	SM	P	SS	SP
X	100	250	360	490	520	750	560
A	100	250	360	490	520	750	560
B	100	250	360	490	520	750	560
C	100	250	360	490	520	750	560
D	100	250	360	490	520	750	560

For convenience, table IV shows the approximate rates of penalty, in dollars per pound, for all combinations of toxic category and P/C/D factor.

TABLE IV.—Rates of Penalty
(in dollars per pound)

Category	P/C/D classes							
	ITP	INF	IS	SM	P	SS	SP	M
X	100	250	360	490	520	750	560	1000
A	100	250	360	490	520	750	560	1000
B	100	250	360	490	520	750	560	1000
C	100	250	360	490	520	750	560	1000
D	100	250	360	490	520	750	560	1000

The statute also requires that the Agency consider the degradability of hazardous substances in establishing rates of penalty. However, as explained elsewhere in the preamble to this Part and to Part 114, this initial rulemaking primarily concerns acute spill-type discharges and the designation and harmful quantity determinations were therefore based solely on acute toxicity. For this reason substances are deemed to have the same degradability within the short term toxicity period for the purposes of this rulemaking. When the Agency modifies the designation and harmful quantity criteria to include chronic toxic effects, the long term degradability of substances will be considered.

2. Prevention and Mitigation:

Prevention of discharges and the

mitigation of their effects are the goals of this rule. The harmful effects of discharges may be reduced in many cases by such actions as warnings to affected water users, containment, treatment, appropriate final disposal of the discharge or debris from a clean-up operation, environmental restoration and monitoring of hazardous substance levels. Appropriate disposal includes compliance with requirements of the Resource Conservation and Recovery Act of 1976, Pub. L. 94-580, 90 Stat. 2795, 42 U.S.C. 9601 (RCRA). Though most of the substances to which these civil penalties apply have been designated as nonremovable, it is anticipated that in many situations partial removal will be possible, particularly when the water body is relatively calm. Such removal

is desirable and is a factor which is considered in the selection of the penalty. Further information concerning mitigation may be found in the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 1510). The "General Pattern of Response Actions" has been specified in 40 CFR Part 1510.53.

Illustrations of the operation of the foregoing scheme for the (b) penalties are set forth in the preamble to the December 1975, proposal, 40 FR 60004-60005.

3. Administrative Procedures:

A number of commentators pointed out that the regulations with respect to penalty rates as proposed on December 30, 1975, failed to spell out the procedures by which notices of violation will be issued and what if any administrative hearings and related procedures would be available with respect thereto. The Agency has concluded that the suggestion is well taken, and that such procedures should be spelled out in these regulations. Accordingly, §§ 119.5-119.13 set forth these procedures. Because these provisions are purely procedural in nature, they may be promulgated without prior notice of proposal and comment period under the pertinent provision of the Administrative Procedure Act, 5 U.S.C. section 553(b)(3). In accordance with that section, sections 119.5-119.13 are promulgated at this time.

In general, these regulations provide for "informal" adjudication. In the sense that the civil penalties are not required by statute to be determined pursuant to a hearing on the record, and therefore Sections 554, 556, and 557 of the Administrative Procedure Act are not applicable. It is the purpose of these regulations to allow the maximum degree of flexibility in the proceedings relating to the assessment of civil penalties. At the same time, the provisions reflect the need to provide an orderly framework for the process as well as a record of what was done during that process. To a large degree, the provisions in these sections follow the procedures for the assessment of civil penalties for violation of oil pollution prevention regulations issued pursuant to section 311(d) of the Act, at 40 CFR Part 114. These regulations contain somewhat greater detail with respect to hearing procedures, the contents of the record of any such hearing, and the provision for review first by the Regional Administrator and subsequently by the Administrator following a recommended decision by the Presiding Officer.

Section 119.5 provides for the assessment of the penalty and the issuance of a Notice of Violation including the contents thereof. Among the provisions in the notice is the right of the

alleged violator to present to the Regional Administrator, within 30 days of his receipt of the Notice of Violation, any explanations, defenses, or other relevant information. In addition, he may request a hearing on the matter within 45 days of his receipt of the Notice of Violation. The reason for allowing a somewhat longer period of time for requesting a hearing is to afford the violator an initial opportunity to resolve any disputed issues promptly with the Regional Administrator without recourse to a hearing.

Section 119.7 sets forth the statutory defenses to liability, which are expressly provided in sections 311(b)(2)(B)(iii) and 311(f).

The provisions in §§119.8, 119.9, 119.10, and 119.11 concerning the request for a hearing, the designation of the Presiding Officer, the consolidation of related cases, and a prehearing conference, respectively, are adopted from comparable provisions in 40 CFR Part 114. Section 119.12(a) regarding the conduct of the hearing is also adopted substantially from the comparable provision of 40 CFR Part 114. Subsection (b) of that section enumerates the contents of the record of the hearing, while subsection (c) makes clear that the standards for admission of evidence shall be "liberal and permissive." While the Presiding Officer may exclude evidence which is immaterial, irrelevant, unduly repetitious, would involve undue delay, or which, if hearsay, is not of the sort upon which responsible persons are accustomed to rely. Doubts should be resolved in favor of admitting the evidence.

Section 119.13 provides that following the conclusion of the hearings, the Presiding Officer, who is a lawyer within EPA appointed by the Regional Administrator to preside over the hearings, shall issue a recommended decision, including a recommendation with respect to the amount of the civil penalty. This is reviewed within 15 days by the Regional Administrator who may adopt or modify it. This decision of the Regional Administrator becomes the decision of the Agency unless within 15 days from the date of receipt of such decision there is an appeal to the Administrator.

Section 119.14 sets forth the procedure for an appeal to the Administrator. The Administrator is authorized to request briefs or supplemental information from the Regional Administrator and the person or persons charged with a violation, though he need not do so. Absent such an invitation by the Administrator, there is no right to submit such briefs or supplemental information. Recognizing the heavy demands upon the time of the Administrator, subsection (d) of this section allows him to be assisted by appropriate staff (but not a person who

has had any prior connection with the case) or to delegate his function under this section to an EPA Judicial Officer.

Dated: March 3, 1978.

DOUGLAS M. COSTLE,
Administrator.

Part 119 is added as follows:

- Sec.
- 119.1 Applicability.
- 119.2 Abbreviations.
- 119.3 Definitions.
- 119.4 Factors to be Considered in Selection of Penalty Rates.
- 119.5 Determination of Units of Measurement and Rates of Penalty.
- 119.6 Notice of Violation and Penalty.
- 119.7 Third Party Comments.
- 119.8 Defenses.
- 119.9 Request for Hearing.
- 119.10 Presiding Officer.
- 119.11 Consolidation.
- 119.12 Prehearing Conference.
- 119.13 Conduct of Hearing.
- 119.14 Decision.
- 119.15 Appeal to Administrator.

ATTORNEY: Secs. 311 and 301(a), Federal Water Pollution Control Act, (33 U.S.C. 1251 et seq.).

§119.1 Applicability.

This regulation applies to substances designated as hazardous under 40 CFR Part 118 in quantities equal to or in excess of those established as harmful under 40 CFR Part 118, except when the owner or operator can show such discharges are made: (1) in compliance with the requirements of sections 301, 302, 304, 306, 307, 318 and 403 and in compliance with an NPDES permit which has been issued pursuant to section 402 of the Act, (2) in compliance with section 404 of the Act or in compliance with a permit issued under the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401 et seq.), (3) in compliance with approved water treatment plant operations as specified by local, State or Federal regulations pertaining to safe drinking water, (4) pursuant to the label directions for application of a pesticide product registered under 40 CFR Part 162 (Federal Register, Vol. 40, No. 128, Part II, pp. 28242-28256, July 3, 1975) by authority of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended by the Federal Environmental Pesticide Control Act of 1972, (Pub. L. 92-518, 86 Stat. 972; Pub. L. 94-140, 88 Stat. 751; 7 U.S.C. 136 et seq.), (5) in compliance with the regulations issued under section 3004 of the Resource Conservation and Recovery Act, 90 Stat. 2795, 42 U.S.C. 6901, (6) in compliance with instructions of the On-Scene Coordinator pursuant to 40 CFR 1510 (the National Oil and Hazardous Substance Contingency Plan), or 33 CFR 133.105(c) (Pollution by Oil and Hazardous Substances), or in accordance with applicable section 311(c)(1)(A) regulations.

(7) in compliance with a permit issued under section 185.7 of Title 14 of the State of California Administrative Code, or (8) from a properly functioning inert gas system when used to provide gas to the cargo tanks of a vessel. For the purpose of this Part 119.1, compliance with an NPDES permit has the same meaning as set forth in 40 CFR Part 118.

§119.2 Abbreviations.

lb=pounds(s).
kg=kilogram(s).
HQ=harmful quantity as required by section 311(b)(4) and specified in 40 CFR Part 118.

UMP=unit of measurement as required by section 311(b)(2)(B)(iv) is that number of pounds designated as a harmful quantity.

ROP=rate of penalty as required by section 311(b)(2)(B)(iv).

P/C/D=physical/chemical/dispersal factor; it is based on whether the substance floats, sinks, mixes, precipitates or is miscible when discharged.

§119.3 Definitions.

As used in this part, all terms shall have the same meaning as in section 311 of the Act and in 40 CFR Parts 116, 117, and 118.

§119.4 Factors to be considered in selection of penalty rate.

(a) In accordance with section 311(b)(2)(B)(iii) of the Act, the owner or operator of any vessel, onshore facility, or offshore facility, from which there is discharged any hazardous substance which has not been determined by the Administrator to be actually removable under section 311(b)(2)(B)(iv) of the Act shall be liable, subject to certain defenses enumerated in §119.8 of this section, to the United States for either one or the other of the following civil penalties, the determination of which shall be at the discretion of the Regional Administrator, subject to review by the Administrator as hereinafter provided:

(1) A penalty based on the toxicity, degradability and dispersal characteristics of the substance, but not less than \$500 nor more than \$5,000; or
(2) A penalty determined by the number of units of measurement discharged multiplied by the amount established for such unit under Section 119.5 of this part, but such penalty shall not be more than \$5,000,000 in the case of a discharge from a vessel and \$500,000 in the case of a discharge from an onshore or offshore facility.

(b) In determining which of the two alternative penalties set forth in the preceding subsection (a) of this Section shall be applied, the Regional Administrator shall consider the nature and circumstances surrounding the discharge, including each of the following factors:

- (1) The size of the discharge;
 (2) The culpability of the owner or operator (including but not limited to any officer, employee, contractor, agent, or servant of such owner or operator);
 (3) The nature, extent, and degree of success of any efforts by such owner or operator to minimize or mitigate the effects of such discharge, including but not limited to any containment or removal of the substance or substances; and
 (4) Such other factors as the Regional Administrator deems appropriate under the circumstances.

§119.5 Determination of units of measurement and rates of penalty.

In accordance with section 311(b)(2)(B)(iv) of the Act, the base penalty rate is determined for each category to be \$1,000 per unit of measurement. The penalty rate for each UM is \$1,000 times the P/C/D factor of the substance. The penalty for the discharge of one pound of a hazardous substance is \$1,000 times the P/C/D factor divided by UM. The penalty rate for a discharge is thus obtained by the formula:

\$1,000 divided by unit of measurement times P/C/D factor times pounds discharged.

For discharges of mixtures or solutions, the rate of penalty will be the sum of the rates for individual hazardous components if the quantity discharged equals or exceeds the harmful quantity for the mixture (determined by procedures set forth in 40 CFR Part 118). For discharges in which the weights of the individual component of a mixture are unknown, the rate of penalty will be that for the most toxic component of the mixture. The following table (Table 119.5) lists each designated hazardous substance (40 CFR Part 118) determined to be not actually removable (40 CFR Part 117) on the same line with the assigned EPA hazard category, the corresponding unit of measurement (and harmful quantity), the assigned physical/chemical/dispersal (P/C/D) adjustment factor and the rate of penalty in

dollars per unit of measurement. For convenience and ease of comparison, the units of measurement have been used to calculate the penalty rates in dollars per pound as shown in the right hand column of Table 119.5.

TABLE 119.5.—Rates of penalty and units of measurement for hazardous substances

Material	Category	UM in pounds (kilograms)	P/C/D factor	ROP (dollars per UM)	Approximate ROP (dollars per pound)
Acetaldehyde	C	1,000 (454)	1.0	1,000	1.00
Acetic acid	C	1,000 (454)	1.0	1,000	1.00
Acetic anhydride	C	1,000 (454)	.75	750	.75
Acetone cyanohydrin	A	10 (4.54)	.58	580	58.00
Acetyl bromide	D	5,000 (2,270)	.75	750	.15
Acetyl chloride	D	5,000 (2,270)	.75	750	.15
Acrolein	X	1 (0.454)	.58	580	580.00
Acrylonitrile	B	100 (45.4)	.58	580	8.80
Aldrin	X	1 (0.454)	.58	580	580.00
Allyl alcohol	B	100 (45.4)	1.0	1,000	10.00
Aluminum sulfate	D	5,000 (2,270)	.52	520	.12
Ammonia	B	100 (45.4)	.58	580	8.80
Ammonium acetate	D	5,000 (2,270)	.49	490	.10
Ammonium benzoate	D	5,000 (2,270)	.75	750	.15
Ammonium bicarbonate	D	5,000 (2,270)	.75	750	.15
Ammonium bichromate	C	1,000 (454)	.75	750	.75
Ammonium bifluoride	D	5,000 (2,270)	.75	750	.15
Ammonium bisulfite	D	5,000 (2,270)	.49	490	.10
Ammonium carbamate	D	5,000 (2,270)	.75	750	.15
Ammonium carbonate	D	5,000 (2,270)	.49	490	.10
Ammonium chloride	D	5,000 (2,270)	.75	750	.15
Ammonium chromate	C	1,000 (454)	.75	750	.75
Ammonium citrate	D	5,000 (2,270)	.75	750	.15
Ammonium fluoroborate	D	5,000 (2,270)	.75	750	.15
Ammonium fluoride	D	5,000 (2,270)	.49	490	.10
Ammonium formate	D	5,000 (2,270)	.75	750	.15
Ammonium hydrosulfide	C	1,000 (454)	1.0	1,000	1.00
Ammonium nitrate	D	5,000 (2,270)	.75	750	.15
Ammonium siliconfluoride	C	1,000 (454)	.75	750	.75
Ammonium sulfamate	D	5,000 (2,270)	.49	490	.10
Ammonium sulfide	D	5,000 (2,270)	.75	750	.15
Ammonium sulfate	D	5,000 (2,270)	.75	750	.15
Ammonium thiocyanate	D	5,000 (2,270)	.49	490	.10
Ammonium thiocyanate	D	5,000 (2,270)	.49	490	.10
Aniline	C	1,000 (454)	.75	750	.75
Antimony pentachloride	C	1,000 (454)	.82	820	.82

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TABLE 119.5.—Rates of penalty and units of measurement for hazardous substances—Continued

Material	Category	μM in pounds (kilograms)	P/C/D factor	ROP (dollars per μM)	Approximate ROP (dollars per pound)
Antimony potassium tartrate.....	C	1,000 (454)	.75	750	.75
Antimony tribromide.....	C	1,000 (454)	.82	820	.82
Antimony trichloride.....	C	1,000 (454)	.82	820	.82
Antimony trifluoride.....	C	1,000 (454)	.49	490	.49
Antimony trioxide.....	D	3,000 (2,270)		360	.07
Arsenic disulfide.....	D	3,000 (2,270)	.36	360	.07
Arsenic pentoxide.....	D	3,000 (2,270)	.49	490	.10
Arsenic trichloride.....	D	3,000 (2,270)	.82	820	.12
Arsenic trioxide.....	D	3,000 (2,270)	.82	820	.12
Arsenic trisulfide.....	D	3,000 (2,270)	.36	360	.07
Barium cyanide.....	A	10 (4.54)	.75	750	75.00
Benzoic acid.....	D	3,000 (2,270)	.75	750	.15
Benzonitrile.....	C	1,000 (454)	.75	750	.75
Benzoyl chloride.....	C	1,000 (454)	.75	750	.75
Benzyl chloride.....	B	100 (45.4)	.36	360	3.60
Beryllium chloride.....	D	3,000 (2,270)	.75	750	.15
Beryllium fluoride.....	D	3,000 (2,270)	.49	490	.10
Beryllium nitrate.....	D	3,000 (2,270)	.75	750	.15
Butyl acetate.....	D	3,000 (2,270)	.58	580	.18
Butylamine.....	C	1,000 (454)	1.0	1,000	1.00
Butyne acid.....	D	3,000 (2,270)	1.0	1,000	.20
Cadmium acetate.....	B	100 (45.4)	.75	750	7.50
Cadmium bromide.....	B	100 (45.4)	.75	750	7.50
Cadmium chloride.....	B	100 (45.4)	.49	1,000	4.90
Cadmium arsenate.....	C	1,000 (454)	.36	360	.36
Cadmium arsenite.....	C	1,000 (454)	.36	360	.36
Calcium carbide.....	D	3,000 (2,270)	.82	820	.12
Calcium chromate.....	C	1,000 (454)	.75	750	.75
Calcium cyanide.....	A	10 (4.54)	.75	750	75.00
Calcium dodecylbenzenesulfonate.....	C	1,000 (454)	.75	750	.75
Calcium hydroxide.....	D	3,000 (2,270)	.75	750	.15
Calcium hypochlorite.....	A	10 (4.54)	.75	750	75.00
Calcium oxide.....	D	3,000 (2,270)	.75	750	.15
Capran.....	A	10 (4.54)	.36	360	36.00
Carboxyl.....	B	100 (45.4)	.36	360	3.60
Carbon disulfide.....	D	3,000 (2,270)	.75	750	.15
Chlordane.....	X	1 (0.454)	.36	360	360.00
Chlorine.....	A	10 (4.54)	1.0	100	10.00
Chloroform.....	B	100 (45.4)	.36	360	3.60
Chloroform.....	D	3,000 (2,270)	.75	750	.15
Chloroform.....	X	1 (0.454)	.36	360	360.00
Chlorosulfonic acid.....	C	1,000 (454)	.75	750	.75
Chromic acetate.....	C	1,000 (454)	.75	750	.75
Chromic acid.....	C	1,000 (454)	.75	750	.75
Chromic sulfate.....	C	1,000 (454)	.75	750	.75
Chromous chloride.....	C	1,000 (454)	.75	750	.75
Cobaltous bromide.....	C	1,000 (454)	.49	490	.49
Cobaltous formate.....	C	1,000 (454)	.75	750	.75

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TABLE 119.5.—Rates of penalty and units of measurement for hazardous substances—Continued

Material	Category	μM in pounds (kilograms)	P/C/D factor	RDP (dollars per μM)	Approximate RDP (dollars per pound)
Cobaltous sulfamate	C	1,000 (454)	.75	750	.75
Coumadin	A	10 (4.54)	.36	360	36.00
Cresol	C	1,000 (454)	.75	750	.75
Cupric acetate	B	100 (45.4)	.75	750	7.50
Cupric isocrotonate	C	100 (45.4)	.36	360	3.60
Cupric chloride	A	10 (4.54)	.75	750	75.00
Cupric nitrate	B	100 (45.4)	.49	490	4.90
Cupric oxalate	B	100 (45.4)	.36	360	3.60
Cupric sulfate	A	10 (4.54)	.75	750	75.00
Cupric sulfate ammoniated	B	100 (45.4)	.75	750	7.50
Cupric tartrate	B	100 (45.4)	.36	360	3.60
Cyanogen chloride	A	10 (4.54)	.75	750	75.00
2,4-D acid	B	100 (45.4)	.36	360	3.60
2,4-D esters	B	100 (45.4)	.36	360	3.60
DDT	M	1 (0.454)	.36	360	360.00
Diazinon	B	1 (0.454)	.36	360	360.00
Diamin	C	1,000 (454)	.75	750	.75
Dichobem	M	1,000 (454)	.36	360	360.00
Dienol	B	1 (0.454)	.36	360	.36
2,2-Dichloropropionic acid	D	1,000 (2,270)	.75	750	.15
Dichlorox	A	10 (4.54)	.75	750	75.00
Dieldrin	M	1 (0.454)	.36	360	360.00
Diethyamine	C	1,000 (454)	1.0	1,000	1.00
Dimethylamine	C	1,000 (454)	.88	880	.88
Dimethylenesulfone	C	1,000 (454)	.24	240	.24
Dimethylenesulfone	C	1,000 (454)	.75	750	.75
Dimethylphenol	C	1,000 (454)	.75	750	.75
Dioxin	M	1,000 (454)	.36	360	360.00
Dioxin	B	100 (45.4)	.36	360	3.60
Dodecylbenzenesulfonic acid	C	1,000 (454)	.75	750	.75
Enoosulfan	M	1 (0.454)	.36	360	360.00
Ethanol	M	1 (0.454)	.36	360	360.00
Ethion	A	10 (4.54)	.36	360	36.00
Ethylene diamine	D	1,000 (454)	.88	880	.88
EDTA	D	1,000 (2,270)	.16	160	.16
Peric ammonium citrate	C	1,000 (454)	.75	750	.75
Peric ammonium citrate	C	1,000 (454)	.75	750	.75
Peric chloride	C	1,000 (454)	.75	750	.75
Peric fluoride	C	100 (45.4)	.36	360	3.60
Peric nitrate	C	1,000 (454)	.49	490	.49
Peric sulfate	C	1,000 (454)	.26	260	.26
Perous ammonium sulfate	C	1,000 (454)	.75	750	.75
Perous chloride	B	100 (45.4)	.75	750	7.50
Perous sulfate	C	1,000 (454)	.36	360	.36
Formaldehyde	D	1,000 (454)	.75	750	.75
Formic acid	D	1,000 (2,270)	1.0	1,000	.20
Formic acid	D	1,000 (2,270)	.75	750	.15
Formic acid	D	1,000 (454)	.75	750	.75
Formic acid	D	1 (0.454)	.36	360	360.00
Formic acid	D	1 (0.454)	.36	360	360.00
Hydrofluoric acid	D	1,000 (2,270)	.75	750	.15
Hydrofluoric acid	D	1,000 (2,270)	1.0	1,000	.20
Hydrogen cyanide	A	10 (4.54)	1.0	1,000	100.00
Isopropylamine	C	1,000 (454)	.75	750	.75
Dodecylbenzenesulfonate	C	1,000 (454)	.75	750	.75
Kelthane	D	1,000 (2,270)	.36	360	.36
Lead acetate	D	1,000 (2,270)	.52	520	.12

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TABLE 119.5.—Rates of penalty and units of measurement for hazardous substances—Continued

Material	Category	μM in pounds (kilograms)	P/C/D factor	ROP (dollars per μM)	Approximate ROP (dollars per pound)
Lead arsenate	D	3,000 (2,270)			
Lead chloride	D	3,000 (2,270)	36	360	07
Lead fluorosulfate	D	3,000 (2,270)	75	750	15
Lead fluoride	C	3,000 (2,270)	82	820	12
Lead iodide	D	1,000 (454) 3,000 (2,270)	36	360	36
Lead nitrate	D	3,000 (2,270)	36	360	07
Lead stearate	D	3,000 (2,270)	75	750	15
Lead sulfate	D	3,000 (2,270)	36	360	07
Lead sulfide	D	3,000 (2,270)	36	360	07
Lead thiocyanate	D	3,000 (2,270)	36	360	07
Lindane	X	3,000 (2,270)	75	750	15
Lithium chromate	C	1,000 (454)	36	360	360.00
Malathion	A	10 (4.54)	49	490	49
Maleic acid	D	3,000 (2,270)	36	360	36.00
Maleic anhydride	D	3,000 (2,270)	49	490	10
Mercuric cyanide	X	3,000 (2,270)	49	490	10
Mercuric nitrate	A	10 (4.54)	75	750	750.00
Mercuric sulfide	A	10 (4.54)	82	820	75.00
Mercuric thiocyanate	A	10 (4.54)	36	360	36.00
Mercurous nitrate	A	10 (4.54)	82	820	12.00
Methoxyfenol	X	10 (4.54)	36	360	360.00
Methyl mercaptan	B	100 (45.4)	88	880	8.80
Methyl parathion	B	100 (45.4)	36	360	3.60
Mevundione	X	10 (4.54)	1.0	1,000	1,000.00
Metacarbamate	C	1,000 (454)	36	360	36
Monomethylamine	C	1,000 (454)	1.0	1,000	1.00
Monomethylamine	C	1,000 (454)	1.0	1,000	1.00
Nand	A	10 (4.54)	36	360	36.00
Nachinalene	D	3,000 (2,270)	36	360	07
Nadanthene acid	B	100 (45.4)	75	750	7.50
Nickel ammonium sulfate	D	3,000 (2,270)			
Nickel chloride	D	3,000 (2,270)	75	750	15
Nickel hydroxide	C	1,000 (454)	75	750	15
Nickel nitrate	D	3,000 (2,270)	36	360	36
Nickel sulfate	D	3,000 (2,270)	49	490	10
Nitric acid	C	3,000 (2,270)	75	750	15
Nitrobenzene	C	1,000 (454)	1.0	1,000	1.00
Nitrogen dioxide	C	1,000 (454)	75	750	75
Nitrophenol	C	1,000 (454)	75	750	75
Paraformaldehyde	C	1,000 (454)	75	750	75
Parathion	X	10 (4.54)	36	360	360.00
Pentachlorophenol	A	10 (4.54)	36	360	36.00
Phenol	C	1,000 (454)	36	360	36
Phosgene	D	3,000 (2,270)	75	750	15
Phosphoric acid	D	3,000 (2,270)			
Phosphorus	X	10 (4.54)	1.0	1,000	1.00

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TABLE 119.5.—Rates of penalty and units of measurement for hazardous substances—Continued

Material	Category	µM in pounds (kilograms)	P/C/D factor	ROP (dollars per µM)	Approximate ROP (dollars per pound)
Phosphorus oxychloride	D	5,000 (2,270)	75	750	15
Phosphorus pentasulfide	C	1,000 (454)	75	750	15
Phosphorus trichloride	D	5,000 (2,270)	75	750	15
Polychlorinated biphenyls	A	10 (4.54)	38	380	38.00
Potassium arsenate	C	1,000 (454)	75	750	75
Potassium arsenite	C	1,000 (454)	75	750	75
Potassium bichromate	C	1,000 (454)	75	750	75
Potassium chromate	A	10 (4.54)	75	750	75.00
Potassium cyanide	C	1,000 (454)	49	490	49
Potassium nitroxide	C	1,000 (454)	75	750	75.00
Potassium permanganate	B	100 (45.4)	75	750	75.00
Propionic acid	D	5,000 (2,270)	1.0	1,000	20
Propionic anhydride	D	5,000 (2,270)	1.0	1,000	20
Pyrethrins	C	1,000 (454)	38	380	38
Quinoline	D	1,000 (454)	75	750	75
Resorcinol	D	5,000 (2,270)	49	490	49
Selenium oxide	C	1,000 (454)	75	750	75
Sodium arsenate	C	1,000 (454)	49	490	49
Sodium arsenite	C	1,000 (454)	75	750	75
Sodium bichromate	C	1,000 (454)	49	490	49
Sodium bisulfite	D	5,000 (2,270)	75	750	15
Sodium bisulfite	D	5,000 (2,270)	75	750	15
Sodium chromate	C	1,000 (454)	75	750	75
Sodium cyanide	A	10 (4.54)	75	750	75.00
Sodium dodecylbenzenesulfonate	C	1,000 (454)	75	750	75
Sodium fluoride	D	5,000 (2,270)	75	750	15
Sodium hydrosulfide	D	5,000 (2,270)	75	750	15
Sodium hydroxide	C	1,000 (454)	49	490	49
Sodium hypochlorite	B	100 (45.4)	75	750	75.00
Sodium methylvate	C	1,000 (454)	49	490	49
Sodium nitrite	B	1,000 (45.4)	75	750	75.00
Sodium phosphate, dibasic	D	5,000 (2,270)	75	750	15
Sodium phosphate, tribasic	D	5,000 (2,270)	75	750	15
Sodium selenite	C	1,000 (454)	75	750	75
Sodium stearate	C	1,000 (454)	75	750	75
Sulfuric acid	A	10 (4.54)	38	380	38.00
Sulfuric acid	C	1,000 (454)	1.0	1,000	1.00
Sulfur monochloride	C	1,000 (454)	75	750	75
2,4,5-T acid	B	100 (45.4)	38	380	38.00
2,4,5-T esters	B	100 (45.4)	38	380	38.00
TDE	B	100 (45.4)	38	380	38.00
Tetraethyl lead	B	100 (45.4)	38	380	38.00
Tetraethyl pyrophosphosphate	A	10 (4.54)	1.0	1,000	1.00
Toxaphene	X	10 (4.54)	38	380	38.00
Trichloron	X	10 (4.54)	75	750	750.00
Trichlorophenol	A	10 (4.54)	38	380	38.00
Trichloroamine	C	1,000 (454)	75	750	75
dodecylbenzenesulfonate	C	5,000 (2,270)	38	380	18
Triethylamine	D	5,000 (2,270)	38	380	38
Trimethylamine	C	1,000 (454)	38	380	38
Uranyl acetate	D	5,000 (2,270)	75	750	15

TABLE 119.5.—Rates of penalty and units of measurement for hazardous substances—Continued

Material	Category	µM in pounds (kilograms)	P/C/D factor	ROP (dollars per µM)	Approximate ROP (dollars per pound)
Uranium nitrate	D	5,000 (2,270)	75	750	15
Vanadium pentoxide	C	1,000 (454)	75	750	15
Vanadyl sulfate	C	1,000 (454)	75	750	15
Vinyl acetate	C	1,000 (454)	38	380	28
Xylenes	C	1,000 (454)	38	380	28
Zinc acetate	C	1,000 (454)	75	750	15
Zinc ammonium chloride	D	5,000 (2,270)	75	750	15
Zinc borate	C	1,000 (454)	75	750	15
Zinc bromide	D	5,000 (2,270)	49	490	10
Zinc carbonate	C	1,000 (454)	38	380	28
Zinc chloride	D	5,000 (2,270)	49	490	10
Zinc cyanide	A	10 (4.54)	38	380	38.00
Zinc fluoride	C	1,000 (454)	38	380	28
Zinc formate	C	1,000 (454)	75	750	15
Zinc hydrosulfite	C	1,000 (454)	75	750	15
Zinc nitrate	D	5,000 (2,270)	49	490	10
Zinc phenolsulfonate	D	5,000 (2,270)	75	750	15
Zinc phosphide	C	1,000 (454)	38	380	28
Zinc silicofluoride	D	5,000 (2,270)	75	750	15
Zinc sulfate	C	1,000 (454)	49	490	10
Zirconium nitrate	D	5,000 (2,270)	75	750	15
Zirconium potassium fluoride	D	5,000 (2,270)	75	750	15
Zirconium sulfate	D	5,000 (2,270)	82	820	12
Zirconium tetrachloride	D	5,000 (2,270)	75	750	15

§ 119.6 Notice of violation and penalty.

Following a determination by the Regional Administrator as to which of the two alternative penalties set forth in § 119.4 shall be assessed against the owner or operator, the Regional Administrator shall proceed to determine the amount of such penalty in accordance with the provisions of said § 119.4, and shall send a Notice of Violation to each person against whom such penalty is assessed. Such Notice of Violation shall specify the following:

- (a) Date of issuance;
- (b) Nature of the violation, including the substance or substances discharged, the date(s) and place of the discharge, and the quantity of each discharge;
- (c) A citation to the pertinent section of the Act and regulations under which the violation is charged;

(d) A citation to the pertinent section of the act and regulations under which the civil penalty has been assessed;

(e) The amount of the civil penalty;

(f) The right of the alleged violator to present to the Regional Administrator, within thirty (30) days of his receipt of the Notice of Violation, written explanations, information or any materials in answer to the charges (including any of the defenses set forth in section 119.8 hereof) or in mitigation of the penalty;

(g) Manner in which the payment of any money may be paid to the United States;

(h) Right to request a hearing within forty-five (45) days of his receipt of the Notice of Violation; and

(i) The procedures for requesting a hearing including the right to be represented by counsel.

§ 119.7 Third party comments.

The Regional Administrator shall send a copy of the Notice of Violation to the State in which the discharge occurred and to any other person who he has reason to believe would be interested in the proceeding. The State and any interested person may submit written comments within thirty (30) days of receipt of the notice.

§ 119.8 Defenses.

It shall be a defense to any liability for any penalty assessed pursuant to section 119.4 through 119.6 hereof if the alleged violator establishes by a preponderance of the evidence that the discharge for which the penalty was assessed was caused solely by one or more of the following:

- (a) An act of God;
- (b) An act of war;
- (c) Negligence on the part of the United States Government; or
- (d) An act or omission of a third party without regard to whether or not such act or omission was or was not negligent.

§ 119.9 Request for hearing.

Within forty-five (45) days of the date of receipt of a Notice of Violation, the person named in the Notice may request a hearing by submitting a written request signed by or on behalf of such person by a duly authorized officer, director, agent, or attorney-in-fact to the Regional Administrator.

(a) Requests for hearings shall:

- (1) State the name and address of the person requesting the hearing;
- (2) Enclose a copy of the Notice of Violation; and
- (3) State with particularity the issues to be raised by such person at the hearing.

(b) After a request for hearing which complies with the requirements of subsection (a) of this section has been filed, a hearing shall be scheduled for the earliest practicable date.

(c) Extensions of the time for the commencement of the hearing may be granted for good cause shown.

§ 119.10 Presiding officer.

The hearing shall be conducted by the Presiding Officer. The Regional

Administrator may designate any attorney in the Environmental Protection Agency to act as the Presiding Officer. No person shall serve as Presiding Officer who has any prior connection with the case including without limitation the performance of investigative or prosecuting functions. The Presiding Officer appointed shall have the full authority to conduct the hearing, decide issues, and to prepare a recommended decision in accordance with §119.14.

§119.11 Consolidation.

The Presiding Officer may, in his discretion, order consolidation of any hearings held under this Part and arising within one Region whenever he determines that consolidation will expedite or simplify the consideration of the issues presented. The Administrator may, in his discretion, order consolidation, and designate one Region to be responsible for the conduct of any hearings held under this Part which arise in different Regions whenever he determines that consolidation will expedite or simplify the consideration of the issues presented. Consolidation shall not affect the right of any person to raise issues that could have been raised if consolidation had not occurred. At the conclusion of the hearing the Presiding Officer shall render a separate recommended decision for each separate civil penalty case.

§119.12 Prehearing conference.

The Presiding Officer may hold one or more prehearing conferences and may issue a hearing agenda which may include, without limitation, decisions with regard to any or all of the following:

- (a) Stipulations and admissions;
- (b) Disputed issues of fact;
- (c) Hearing procedures including the names of witnesses, scheduling, identification and admission of documentary evidence, and the time allotted for oral arguments; and
- (d) Any other matter which may expedite the hearing or aid in disposition of any issues raised therein.

§119.13 Conduct of hearing.

(a) The hearing shall be held, where feasible, in the general location of the facility where the alleged violation occurred or as agreed to by EPA and the person charged. The Presiding Officer shall have the duty to conduct a fair and impartial hearing, to take action to avoid unnecessary delay in the disposition of proceedings, and to maintain order. The person charged with the violation may offer relevant facts, statements, explanations, documents, testimony and other items in defense to the charges, or which may bear

upon the penalty to be assessed. The EPA or appropriate Agency personnel shall have the opportunity to offer facts, statements, explanations, documents, testimony, or other material in order for the Presiding Officer to be fully informed. The person charged with the violation shall be informed in writing of the decision of the Presiding Officer and shall be advised of his right to appeal.

(b) A record shall be kept of the hearing, which shall include at least the following:

- (1) The Notice of Violation;
- (2) Any materials and information relied upon by the Regional Administrator in issuing the Notice of Violation and in determining and assessing the civil penalty or penalties at issue;
- (3) Any materials submitted by the alleged violator in defense or opposition to the penalty;
- (4) A verbatim transcript of the testimony of any witness presented at the hearing, which testimony shall be under oath;
- (5) Any other materials offered by any party to the hearing and admitted by the Presiding Officer; and
- (6) The recommended decision of the Presiding Officer described in §119.14.

(c) The standards for admission of evidence shall be liberal and permissive. The Presiding Officer may exclude evidence which is immaterial, irrelevant, unduly repetitious or cumulative, or would involve undue delay or which, if hearsay, is not of the sort upon which responsible persons are accustomed to rely. In general, doubtful situations should be resolved in favor of admitting the evidence.

§119.14 Decision.

(a) Within thirty (30) days after the conclusion of the hearing, the Presiding Officer shall issue a recommended decision including a recommendation with respect to the amount of the civil penalty. In his recommendation concerning the civil penalty the Presiding Officer shall consider the factors set forth in §119.4 through 119.8. His recommended decision shall contain appropriate findings of fact and conclusions such as to set forth clearly the basis for the recommended decision. A recommended decision shall be sent to the person charged in the Notice of Violation, and to the Regional Administrator.

(b) Within fifteen (15) days of the issuance of the recommended decision of the Presiding Officer the Regional Administrator shall either adopt or modify the recommended decision of the Presiding Officer, in writing, stating his reason for any modification. The Regional Administrator shall con-

sider only information contained in the record established pursuant to §119.13(b) of this Part. The recommended decision as thus adopted or modified (hereinafter the "Regional Administrator's decision") shall be sent to the person charged in the Notice of Violation, and shall become the final decision of the Environmental Protection Agency unless within fifteen (15) days from the date of receipt of such decision, the person assessed the penalty appeals the decision to the Administrator, or unless the Administrator shall have stayed the effectiveness of the decision pending review on his own motion.

§119.15 Appeal to administrator.

(a) The person assessed a penalty in the Regional Administrator's decision or any interested person who participated in the hearing shall have the right to appeal an adverse decision to the Administrator upon filing a written Notice of Appeal in the form required by paragraph (b) of this section within fifteen (15) days of the date of receipt of the Presiding Officer's decision.

(b) The Notice of Appeal shall be filed with the Regional Administrator and the Administrator, and shall:

- (1) State the name and address of the person filing the Notice of Appeal;
- (2) Contain a concise statement of the facts on which the person relies;
- (3) Contain a concise statement of the legal basis on which the person relies; and
- (4) Contain a concise statement setting forth the action which the person proposes that the Administrator take.

(c) The Administrator, after a Notice of Appeal in proper form has been filed, shall render a decision with respect to the appeal promptly. He may, though he need not, invite briefs or supplemental information from the Regional Administrator and the person(s) charged with the violation. In rendering his decision, the Administrator may adopt, modify, or set aside the decision of the Regional Administrator in any respect and shall include in his decision a concise statement of the basis thereof. The decision of the Administrator on appeal shall be effective when rendered.

(d) The Administrator may be assisted in his functions under this Section by such staff as he deems appropriate (but not a person who has any prior connection with the case including without limitation the performance of any investigative or prosecuting functions), and he may delegate his authority to act under this section to a judicial officer within the Environmental Protection Agency.

[PR Doc. 78-4342 Filed 3-10-78; 8:45 am]

(6560-01)

ENVIRONMENTAL PROTECTION
AGENCY

(40 CFR Parts 116, 117, 118, and 119)

EPL 828-11

HAZARDOUS SUBSTANCES

Proposed Rules for Designation, De-
termination of Removability, Deter-
mination of Harmful Quantity, and
Determination of Units of Measure-
ment and Rates of PenaltyAGENCY: Environmental Protection
Agency.

ACTION: Proposed rulemaking.

SUMMARY: In this separate part of the Federal Register the Environmental Protection Agency is publishing four final rules on the discharge of hazardous substances. The first rule designates an initial list of 271 substances as hazardous. The other three final rules determine their removability, harmful quantities when discharge to water and rates of penalty for the discharge of each of these hazardous substances.

The following proposed rules are published for the purpose of designating an additional 28 substances as hazardous, and of determining their removability, harmful quantities and rates of penalty. In effect, the following proposed rules would amend the above four final rules to designate an additional 28 substances as hazardous.

DATES: Comments on this proposal will be received until May 12, 1978.

FOR FURTHER INFORMATION CONTACT:

Kenneth M. Mackenthun, Director, Criteria and Standards Division (WH-585), Office of Water Planning and Standards, Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460, 202-755-0100.

SUPPLEMENTARY INFORMATION: Section 311(b)(2)(A) of the Act provides that the Administrator shall promulgate regulations designating hazardous substances. In Part 116, EPA has designated 271 substances as hazardous materials. The Administrator now proposes to add 28 substances as hazardous substances. These 28 substances meet the criteria that were used for designating substances to the hazardous substances list in Part 116. Further, the Administrator will add additional substances to the hazardous substances list from time to time as appropriate.

Section 311(b)(2)(B)(i) of the Act provides that the Administrator shall make a determination of whether or

not any designated hazardous substance can actually be removed. On December 30, 1975, EPA proposed a determination that all substances designated as proposed hazardous substances in Part 116 are not actually removable. However, in response to public comment, the Administrator in the final rulemaking made a determination that substances on the hazardous substances list, except 10 substances with oil-like physical properties, are not actually removable. For this new notice, since none of the proposed substances has oil-like physical properties, the Administrator proposes to make a determination that all are not actually removable.

Section 311(b)(4) of the Act provides that the Administrator shall by regulation determine harmful quantities of those substances designated as hazardous substances. The Administrator has promulgated a Part 118 which, *inter alia*, sets forth a procedure as prescribed in the preamble to Part 118 for determining harmful quantities of hazardous substances. The Administrator has used the same procedures to determine proposed harmful quantities for the substances proposed in this regulation.

Section 311(b)(2)(B)(iv) of the Act provides that the Administrator shall establish by regulation units of measurement and rates of penalty for designated hazardous substances. The Agency has concurrent with this notice promulgated a Part 119 which sets forth a procedure for determining units of measurement and rates of penalty for the designated hazardous substances. The Administrator has utilized the same procedures as prescribed in the preamble to Part 119 for proposing units of measurement and rates of penalty for the substances proposed as designated hazardous substances.

PART 116—DESIGNATION OF HAZARDOUS SUBSTANCES

It is proposed to amend § 116.4 as follows:

§ 116.4 Designation of hazardous substances.

TABLE 116.4A.—LIST OF HAZARDOUS SUBSTANCES

Common name	CAS No.	Synonyms	Isomers	CAS No.
Adipic acid	174049	Tetradecadic acid	_____	_____
n-butyl phthalate	94742	1,3-benzenedicarboxylic acid, dibutyl ester, dibutyl phthalate	_____	_____
Carbofuran	156362	Puridon	_____	_____
Carbon tetrachloride	56223	Tetrachloromethane, perchloromethane	_____	_____
Crotamidenol	4170303	1-butanol, propylene aldehyde	_____	_____
Dichlorobenzene	2521126	Dichloromethane	Ortho _____	95501
			Para _____	106467
			Meta _____	18899
Dichloropropane	26638197	Propylenedichloride	1,2 _____	78875
			1,3 _____	78899
			1,4 _____	142755
Dichloropropene	38952238		1,2 _____	78894
Dichloropropene-dichloropropene (mixture)	8002198	D-D mixture Alden D	_____	_____

The preambles to Parts 116, 117, 118, and 119 issued by the Agency, set forth extensive information concerning the Act and the Agency's methodologies for designating hazardous substances (Part 116), determining whether such substances can actually be removed (Part 117), establishing harmful quantities (Part 118), and establishing rates of penalty (Part 119). Those regulations should be consulted in connection with this notice, since the Agency is basing the proposed designations, removability determinations, harmful quantities, and rates of penalties set forth herein upon the same scientific and technical analysis and information. Information concerning the characteristics of the substances proposed to be designated as hazardous are available from Kenneth M. Mackenthun, Director, Criteria and Standards Division (WH-585), Office of Water Planning and Standards, Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460.

The economic impact of the proposal has been evaluated. The economic impacts will be incremental to the cost associated with implementing the initial section 311 regulations. It is estimated that final promulgation of these proposed regulations will increase the economic impact about 10 percent of the impact associated with the initial regulations. Therefore, no inflationary impact statement is required.

Comments submitted on or before will be considered in the preparation of final rulemaking. All comments should be submitted to Kenneth M. Mackenthun, Director, Criteria and Standards Division (WH-585), Office of Water Planning and Standards, Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460.

Dated: March 3, 1978.

DOUGLAS M. CASTLE,
Administrator.

PROPOSED RULES

10507

TABLE 116.4A.—LIST OF HAZARDOUS SUBSTANCES—Continued

Common Name	CAS No.	Synonyms	Isomers	CAS No.
Dinitrotoluene	15321146	DNT	2,4. 2,6. 2,4.	121142 606202 610399
Epichlorohydrin	106898	-chloropropylene oxide		
Ethylene dibromide	106924	1,2-dibromomethane, acetylene dibromide, sym-dibromomethylene		
Ethylene dichloride	107063	1,2-dichloroethane, sym-dichloroethane		
Hexachlorocyclopentadiene	77474	Perchlorocyclopentadiene		
Hydrogen sulfide	773394	Hydrogen sulfide, sulfur hydride		
Kepone	143500	Chlorodewane, 1,1,1,2,2,2,3,3,3,4,4,4,5,5,5,6,6,6-dichlorooctadecane-1,2-ol, octadecane-1H-cyclobutadiene-2-one		
Mercaptodimethyl	2032657	Mesurel		89722
Nitrotoluene	1321126		Ortho. Meta. Para	99061 99990
Propargite	2312358	Omita		
Propylene oxide	75589	Propylene oxide		
Silver nitrate	776188	Nitric acid silver (1-)- salt, lunar caustic		
2,4,5-T amines	6369966	Acetic acid, 2,4,5-trichlorophenoxy-, compound with N,N-dimethylmethanamine (1:1)		
	6369977	Acetic acid, 2,4,5-trichlorophenoxy-, compound with N-methylmethanamine (1:1)		
	1319728	Acetic acid, 2,4,5-trichlorophenoxy-, compound with 1-amino-2-propanol (1:1)		
	3813147	Acetic acid, 2,4,5-trichlorophenoxy-, compound with 2,2,2-trifluoroethanol (1:1)		
2,4,5-T salts	1356099	Acetic acid, 2,4,5-trichlorophenoxy-, sodium salt		
2,4,5-TP acid	50721	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-		
2,4,5-TP acid esters	32534953	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-, isooctyl ester		
Thallium sulfate	1003191			
	7440186			
Trichloroethylene	79016	Ethylene trichloride		
Vinylene chloride	15354	1,1-dichloro-ethylene, 1,1-dichloroethene		

TABLE 116.4B.—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER

CAS No. and common name	143500	542756	1536162	2032657	2312358	3813147	4170303	6369966	6369977	7448186	776188	7783064	8003198	1003191	106898	106924	107063	121142	121049	143239
	143500	1,2-dichloropropene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene	1,2-dinitrotoluene
	542756	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene
	1536162	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride	Carbon tetrachloride
	2032657	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl	Mercaptodimethyl
	2312358	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite	Propargite
	3813147	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine
	4170303	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde	Crotonaldehyde
	6369966	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine
	6369977	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine	2,4,5-T amine
	7448186	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate
	776188	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate	Silver nitrate
	7783064	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide	Hydrogen sulfide
	8003198	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture	Dichloropropene-Dichloropropene mixture
	1003191	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate	Thallium sulfate
	106898	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin	Epichlorohydrin
	106924	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide	Ethylene dibromide
	107063	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride	Ethylene dichloride
	121142	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene	1,2-Dinitrotoluene
	121049	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid	Adipic acid
	143239	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene	1,3-dichloropropene

PART 117.—DETERMINATION OF REMOVABILITY OF HAZARDOUS SUBSTANCES

It is proposed to amend §117.3 as follows:

§117.3 Determination of actual removability.

The elements, compounds or their structural isomers, or mixtures thereof, designated as proposed hazardous substances under 40 CFR Part 116 cannot actually be removed.

PART 118.—DETERMINATION OF HARMFUL QUANTITIES FOR HAZARDOUS SUBSTANCES

It is proposed to amend §118.4 by adding the following proposed hazardous substances to table 118.4.

§118.4 Determination of harmful quantities.

TABLE 118.4.—HAZARDOUS QUANTITIES OF HAZARDOUS SUBSTANCES

Material	Category	HQ in lb/kg
Adipic acid	D	5,000 (2270)
p-Butyl phthalate	B	100 (45.4)
Carbonyl	A	10 (4.54)
Carbon tetrachloride	D	5,000 (2270)
Crotonaldehyde	B	100 (45.4)
Dichlorobenzene	B	100 (45.4)
Dichloropropene	D	5,000 (2270)
Dichloropropene-Dichloropropene mixture	D	5,000 (2270)
Dinitrotoluene	C	1,000 (454)
Epichlorohydrin	C	1,000 (454)
Ethylene dibromide	C	1,000 (454)
Ethylene dichloride	D	5,000 (2270)
Hexachlorocyclopentadiene	X	1 (0.454)
Hydrogen sulfide	X	1 (0.454)
Kepone	B	100 (45.4)
Mercaptodimethyl	B	100 (45.4)
Nitrotoluenes	C	1,000 (454)
Propargite	A	10 (4.54)
Propylene oxide	D	5,000 (2270)
Silver nitrate	X	1 (0.454)
2,4,5-T Amine	B	100 (45.4)
2,4,5-T Salts	B	100 (45.4)
2,4,5-TP Acid	B	100 (45.4)
2,4,5-TP Acid Esters	B	100 (45.4)
Thallium sulfate	C	1,000 (454)
Trichloroethylene	C	1,000 (454)
Vinylene chloride	D	5,000 (2270)

PROPOSED RULES

PART 119—DETERMINATION OF
UNITS OF MEASUREMENT AND
RATES OF PENALTY FOR HAZ-
ARDOUS SUBSTANCES

It is proposed to amend § 119.5 by adding the following proposed hazardous substances to table 119.5.

§ 119.5 Determination of units of measure, cost and rates of penalty.

TABLE 119.5.—Rates of penalty and units of measurement of hazardous substances

Material	Category	UM in pounds (kilograms)	P/C/D factor	RCP (dollars per UM)	Approximate RCP (dollars per pound)
Adipic acid _____ (2.270)	D	5,000	0.75	750	0.15
n-Butyl phthalate _____	B	100 (45.4)	.36	360	3.60
Carbofuran _____	A	10 (4.54)	.36	360	36.00
Carbon tetrachloride _____ (2.270)	D	5,000	.36	360	.37
Crotonaldehyde _____	B	100 (45.4)	.38	380	3.80
Dichlorobenzene _____	B	100 (45.4)	.36	360	3.60
Dichloropropane _____ (2.270)	D	5,000	.75	750	.15
Dichloropropene _____ (2.270)	D	5,000	.36	360	.37
Dichloropropene-dichloropropane mix _____	D	5,000 (2.270)	.75	750	.15
Dinitrotoluene _____	C	1,000 (454)	.36	360	.36
Epichlorohydrin _____	C	1,000 (454)	.75	750	.75
Ethylene dibromide _____	C	1,000 (454)	.75	750	.75
Ethylene dichloride _____ (2.270)	D	5,000	.75	750	.15
Hexachlorocyclopentadiene _____	X	1 (0.454)	.36	360	360.00
Hydrogen sulfide _____	B	100 (45.4)	.38	380	3.80
Kerosene _____	X	1 (0.454)	.36	360	360.00
Mercaptodimethylur _____	B	100 (45.4)	.36	360	3.60
Nitrobenzene _____	C	1,000 (454)	.36	360	.36
Propargite _____	A	10 (4.54)	.36	360	36.00
Propylene oxide _____ (2.270)	D	5,000	.36	360	.36
Silver nitrate _____	X	1 (0.454)	.39	390	390.00
1,4,5-T amides _____	B	100 (45.4)	.36	360	3.60
1,4,5-T salts _____	B	100 (45.4)	.45	450	4.50
1,4,5-TP acid _____	B	100 (45.4)	.36	360	3.60
1,4,5-TP acid esters _____	B	100 (45.4)	.36	360	3.60
Thallium sulfate _____	C	1,000 (454)	.45	450	.45
Trichloroethylene _____	C	1,000 (454)	.36	360	.36
Vinylidene chloride _____ (2.270)	D	5,000	.75	750	.15

[FR Doc. 78-6343 Filed 3-10-78; 3:45 am]

Personal Safety During Hazardous Material Spill Operations

I. Introduction

Of major concern in the control of hazardous material spills is the protection of emergency response personnel from dangers of the spilled chemicals which are often extremely toxic and corrosive. The purpose of this outline is to provide general information on types of protective devices necessary to insure the safety of individuals during spill clean-up operations. Because of the multiplicity of chemicals that personnel may be exposed to during spill situations, details of specific safety equipment for specific hazardous substances are not possible at this time. Information contained herein are therefore only directed towards the reduction of the hazard potential of dangerous materials in general.

II. Types of Exposure

The accidental release of chemicals to the environment may be inherently hazardous in different degrees. Improper protection can lead to severe personal injury. Injuries resulting from hazardous material spills are caused chiefly by chemicals or their fumes coming in contact with the body (skin and eyes) or through inhalation.

A. Contact with Skin and Eyes

Contact of hazardous materials with the skin is of primary importance because it is the most probable type of exposure during the spills. Many materials in direct contact with the skin will dissolve the fats and oils in the skin tissue. The most common result of excessive contact on the skin is localized itching, dryness, irritation or burn. But an appreciable number of materials are absorbed through the skin with sufficient rapidity to produce systemic poisoning. These materials may enter the body through the skin either as a result of direct accidental contamination or indirectly when the material has been spilled on the clothing. Some quite potent chemicals such as dimethyl sulfate can cause burns of disabling extent if but a few drops touch the clothing.

Contact of chemicals with the eyes is of particular concern because these organs are extremely sensitive. Very few substances are innocuous in contact with the eyes; most are painful and irritating and a considerable number are capable of causing burns and loss of vision.

B. Inhalation

When hazardous vapors or gases are inhaled, they may pass into the general

circulation system and may be distributed to the heart and central nervous system with extreme rapidity. Some vapors or gases act so violently in the upper respiratory system and lungs that they may cause unconsciousness or even death if the individual is not promptly removed to an uncontaminated atmosphere and given proper medical attention. Other vapors or gases may first cause mild symptoms such as headache, dizziness and fatigue, then nausea, intestinal, visual or mental disturbances and finally injuries to the blood, liver, kidneys or other organs.

III. PROTECTIVE DEVICES

Personnel who may be called upon to work in atmospheres contaminated with hazardous substances should have special safety equipment and protective clothing readily available for emergency use. As a matter of good operational policy, it is important that all prospective users of these devices know where they are stored, how they are used and what are their limitations. It is also essential that all personal protective equipment be inspected and cleaned at regular intervals and always before use by another person. A general description of some of the basic personal protective devices are given below.

A. Respiratory Protection

Self contained air or oxygen respirators are much safer than the air purifying type, since the wearer carries either a supply of air or an oxygen generating canister, and this type does not depend on purification of the contaminated air for breathing purposes. In emergency situations, where the concentration of contaminants may be high or is unknown, only self contained respirators should be used. The supplied air or oxygen (hose type) respirator will not usually be applicable to hazardous material spill situations, since compressors or other air supplying devices may not be readily available and accessible during these emergency conditions. Also, the hose type respirators limit the wearer's freedom of movement, whereas the self contained units allow complete freedom. The pressure demand compressed air or oxygen respirator is considered the most fool-proof device since it provides positive breathing safety in the most dangerous atmospheres. Where longer exposure time is required, the self-generating oxygen respirator is a good alternative.

The U.S. Bureau of Mines has a testing section where respiratory devices are inspected and tested. The Bureau tests commercial respiratory protective devices and issues approvals to those which meet its standards. Maximum safety demands that

only U.S. Bureau of Mines approved respiratory equipment be used.

Personal respiratory protection should be used as a primary protective device when it is necessary to enter a highly contaminated area for short periods of time. Respiratory protective equipment is basically of two general types:

1. Self contained or supplied air or oxygen respirators.

2. Air-purifying respirators.

There are several classifications within these two types:

1. Self Contained or Supplied Air or Oxygen Respirators

- a. Self Contained

These respirators provide the wearer with respirable air from a source of supply independent of the atmosphere where the wearer is located. They are entirely self contained and can be used in any atmosphere. The principal types of self contained respirators are:

- 1) Demand Compressed Air or Oxygen

In this device, compressed air or oxygen, contained in a cylinder worn by the user, is supplied

through pressure reducing valves to a close fitting full face, rubber face piece only when the wearer inhales. There is no recirculation and the exhaled breath is directed to the atmosphere. These units are usually rated for 30 minutes duration and are equipped with alarm systems which warn the user when to leave the hazardous atmosphere because of diminishing air supply.

- 2) Pressure Demand Compressed Air or Oxygen

This respirator is a modification of the Demand Compressed Air or Oxygen Respirator. It is designed to provide an extra margin of safety for personnel who must enter atmospheres immediately hostile to life. This unit also provides air or oxygen on demand, but in addition, it maintains within the face piece a slight positive pressure above that of the outside atmosphere. This positive pressure prevents inward leaks of dangerous gases, thus assuring breathing safety in the most toxic environments.

- 3) Self-Generating Oxygen (Recirculating)

In this respirator, the exhaled breath is directed to a chemical canister which simultaneously releases oxygen by the action of the moisture in the breath on the chemicals and absorbs

carbon dioxide from the breath. The breath containing the released oxygen enters a breathing bag (which is connected by tubing to the face piece) for inhalation, and the exhaled breath repeats the cycle. The canister for this respirator, under ordinary usage, can supply sufficient oxygen for one hour. Although this respirator is lighter than the pressure demand type, it is quite bulky, and once the seal on the canister is broken, the respirator must be used or the canister discarded.

b) Supplied

These respirators supply air to the wearer through a hose from an uncontaminated remote source and are therefore independent of the atmosphere surrounding the wearer. Extreme care, however, must be exercised with these respirators in obtaining a safe air supply. It is important that blowers or other air sources be in an area which is free from air contaminants. These respirators provide relatively unlimited time of use.

2. Air-Purifying Respirators

This type of respirator offers limited protection, since it depends solely on gas-absorbing material or mechanical filtration media to remove specific contaminants from the air. Since this device utilizes the air surrounding

the wearer, it is not suitable in an oxygen deficient atmosphere and must not be used in environments containing contaminants in concentrations higher than those for which it was designed. For example, air-purifying respirators do not offer protection when oxygen levels fall below 16% by volume or when concentrations of a toxic gas or vapor in the breathing atmosphere are greater than 2% by volume (20,000 parts per million). Similar to the self-contained respirators, these units have limited duration periods (about one hour). The following are typical air-purifying respirators:

a. Chemical
Respirators

In this device, inspired air is drawn over suitable chemicals in a cartridge where gaseous contaminants are removed. This respirator is usually designed for a particular contaminant only, but may also be designed for combinations of contaminants.

b. Mechanical
Filters

These are similar to the chemical respirators except that the purifying chemicals in the cartridge are replaced by filters. Filter respirators are designed to remove either a specific single particulate contaminant or several different contaminants.

c. Combination
Respirators

These are combined respirators, in one unit, for simultaneous protection against gases, vapors and particulates. They consist of chemical cartridges with mechanical filters in series, so that inspired air passes first through the filter and then over the chemical.

B. Eye Protection

Eye protection is of major importance during spill emergency situations because of the ever present danger of injurious vapors or chemical splash. Personnel exposed to these situations should always wear suitable safety eye wear. There are numerous styles and types of safety glasses available. The following lists some of the representative types:

1. Plastic-rimmed safety spectacles with hardened glass or plastic lenses, available with or without side shields.

2. Plastic chemical splash goggles which fit the contours of the face and fit comfortably over all personal and safety spectacles. Some types of goggles also protect the nose and forehead.

3. Plastic face shields, which cover the entire face, can also be worn over personal and safety spectacles.

C. Body Protection

Various specially treated protective garments including coats, suits, overalls, aprons, rain wear and similar clothing should be made available to personnel to safeguard the body against exposure to hazardous materials during spill emergencies. These garments should be made of solvent-proof plastics, synthetic rubbers or other suitable protective material resistant to corrosive chemicals.

D. Foot Protection

Rubber safety boots with metal reinforced toe guards are recommended for protection from heavy objects and other foot hazards. Boots should be equipped with anti-skid outsoles to permit the wearer to have a reasonably secure footing even on oil covered surfaces.

E. Hand and Head Protection

Many minor injuries to personnel may be prevented by the proper utilization of effective hand protection. Heavy butyl rubber or neoprene molded gloves should be made available to individuals involved in spill operations. These gloves are furnished in different sizes up to elbow length and are suitable for handling a wide variety of acids and other corrosives.

Personnel should also be provided with light weight

plastic safety helmets (hard hats) to guard against head injuries.

F. Miscellaneous Protection

Emergency response personnel should also be equipped with: battery-type lanterns for providing emergency illumination; an explosimeter to determine the explosive characteristics of an atmosphere; a portable oxygen indicator to quickly determine the oxygen content of a contaminated area; and portable first aid appliances.

IV First Aid

It must be recognized that, despite the most comprehensive precautionary practices during spill emergency operations, accidents will occur and, consequently, injuries to personnel must be anticipated. For this purpose, the following general first aid measures are suggested. For more detailed instructions, a recognized source, such as the "Textbook on First Aid" of the American Red Cross, should be consulted.

A. Toxic Vapor Inhalation

1. Remove exposed victim to fresh air at once. (Rescuers should be properly protected).

2. If breathing has stopped, give artificial respiration.

3. Keep victim quiet,

warm, lying down and obtain medical assistance.

4. Watch victim closely, and turn head to side and assist if vomiting occurs, prevent aspiration of vomitus, clear mouth and throat often, maintain a clear airway at all times.

B. Skin Exposure

1. Immediately remove all contaminated clothing from victim. (Those assisting victim should wear suitable protective gloves).

2. Thoroughly flush skin with clean water to remove all traces of hazardous chemical.

3. Keep victim quiet, warm, lying down and obtain medical assistance.

C. Eye Exposure

1. Continuously wash eyes with clean water for at least 15 minutes.

2. Obtain medical assistance, preferably an ophthalmologist with experience in handling chemical burns of the eye.

V. Summary of General Safety Precautions

Extreme care should be exercised by personnel involved in hazardous material spills. The hazardous chemical should not be allowed to come in contact with the unprotected skin or eyes, and inhalation of

vapors should be avoided. If necessary to enter a spill area, PUT ON COMPLETE PROTECTIVE CLOTHING including goggles, boots, helmet, coveralls, gloves, etc. and WEAR SELF CONTAINED BREATHING APPARATUS.

References

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2. "Fire Protection Guide on Hazardous Materials", National Fire Protection Association, Boston, 1967-1968.
3. "Hazardous Chemicals Data", National Fire code No.49, National Fire Protection Association, Boston, 1965.
4. Manufacturing Chemists' Association, Inc., "Guide for Safety in the Chemical Laboratory", D. Van Nostrand Company Inc. New York, 1962.
5. Manufacturing Chemists' Association, Inc., "Laboratory Waste Disposal Manual", 1969.
6. Plunkett, E.R., "Handbook of Industrial Toxicology", Chemical Publishing Company, Inc., New York, 1966.
7. Sax, N.I., "Dangerous Properties of Industrial Materials", Rheinhold Book Corporation, New York, 1968.
8. Schefflan, L., Jacobs, M., "The Handbook of Solvents", D. Van Nostrand Company, Inc., New York, 1953.
9. First Aid for the Mineral and Allied Industries, Bureau of Mines, and "Emergency Care and Treatment of the Sick and Injured" by the Committee on Injuries of the American Academy of Orthopedic Surgeons.

This outline prepared by I. Wilder, Acting Chief, Hazardous Materials Research Section, EPA, CWP, Edison Water Quality Laboratory, Edison, NJ 08817



Register Federal

FRIDAY, APRIL 28, 1978
PART IV



ENVIRONMENTAL PROTECTION AGENCY

Standards Applicable to
Transporters of
Hazardous Wastes

[6560-01]

ENVIRONMENTAL PROTECTION AGENCY

(FRL 875-3)

(40 CFR Part 250)

STANDARDS APPLICABLE TO TRANSPORTERS OF HAZARDOUS WASTE AND PUBLIC HEAR- ING

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) issues proposed standards under section 3003 of the Solid Waste Disposal Act (the Act) prescribing procedures for recordkeeping, acceptance of hazardous waste for transport, compliance with the manifest system, delivery of the hazardous waste to a designated facility, spills, and placarding/markings of vehicles. In addition, EPA proposes that all hazardous wastes which meet the Department of Transportation's (DOT's) definition of a hazardous material be subject to the Federal DOT Hazardous Materials Regulations for both interstate and intrastate shipments. DOT is in the process of developing regulations which will include coverage of hazardous wastes. If DOT develops standards similar to those proposed by EPA, the EPA hazardous waste transportation standards will be modified to reflect the DOT Hazardous Materials Regulations or will reference the DOT Hazardous Materials Regulations. These proposed standards are applicable to transporters of hazardous waste, and they are being issued to protect human health and the environment.

EPA will be issuing additional proposed regulations for hazardous waste at a later date. For details concerning dates and hearings on these future proposed regulations see supplementary information.

DATES: Comments requested on or before June 27, 1978. Hearing: First joint hearing with DOT is scheduled for June 20, 1978.

For details concerning comment due date and hearings on this proposed regulation, see supplementary information.

ADDRESSES: Comments to: Deputy Assistant Administrator for Solid Waste (WE-562), U.S. Environmental Protection Agency, Washington, D.C. 20460. Communications should identify the regulatory docket or notice number, which is Section 3003 for these proposed standards.

Official record for this rulemaking available at: Room 2111D, U.S. Environmental Protection Agency, 401 M Street S.W., Washington, D.C. 20460, and is available for viewing from 9 a.m. to 4 p.m., Monday through Friday, excluding holidays.

Hearing: First joint hearing with DOT is scheduled for June 20, 1978, at the Holiday Inn, Old Town, 480 King Street, Alexandria, Va. 703-549-6080.

FOR FURTHER INFORMATION CONTACT:

Mr. Arnie Edelman, 202-755-9187.

SUPPLEMENTARY INFORMATION: Dates—EPA will propose all hazardous waste regulations under Subtitle C during the spring and summer of 1978. Since certain Sections will be ready for proposal ahead of others, EPA will propose each Section as it becomes available. Comments concerning Section 3003 standards would be appreciated by June 27, 1978. However, the comment period for all Sections (3001-3005), will remain open until at least 60 days after the last Section is proposed in the Federal Register. This will enable those who would prefer to comment on all five Sections at the same time to do so. A notice announcing the closing date for all Sections will be published in the Federal Register upon publication of the last Section.

HEARING: Public hearings on all Subtitle C proposed regulations (3001-3005) will be held during the summer of 1978. The dates of the public hearings will be announced in the Federal Register. EPA and DOT plan to hold joint public hearings on these regulations. The first joint hearing with DOT is scheduled for June 20, at the Holiday Inn, Old Town, 480 King Street, Alexandria, Va. 703-549-6080. Additional EPA/DOT hearing dates will be announced in the Federal Register to coincide with the public hearings that will be held on Sections 3001 and 3002.

Oral or written comments may be submitted at the public hearing on these proposed standards. Registration for the hearing will be held between 8:30 and 9 a.m. Requests to participate in the public hearing should be directed to: Ms. Gerri Wyr, Public Participation Officer, Office of Solid Waste (WE-562), U.S. Environmental Protection Agency, Washington, D.C. 20460, 202-755-9157.

FOR FURTHER INFORMATION CONTACT:

Mr. Arnie Edelman, Hazardous Waste Management Division, Office of Solid Waste (WE-562), U.S. Environmental Protection Agency, Washington, D.C. 20460, 202-755-9187.

Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94-580) (hereinafter RCRA), creates a regulatory framework to control hazardous waste. Congress has found that such waste presents "special dangers to health and requires a greater degree of regulation

than does non-hazardous solid waste" (Section 1002(b)(5)). Because of the seriousness of this waste problem, Congress intended that the States develop programs to control it. In the event that States do not choose to operate this program, EPA is required to do so.

This rule is one of a series of seven being developed and proposed under Subtitle C to implement the hazardous waste management program. It is important to note the broad definition of solid waste (Section 1004(27)) which encompasses (with a few exceptions) garbage, refuse, sludges, and other discarded materials including liquids, semi-solids, and contained gases from both municipal and industrial sources. Hazardous wastes, which are a subset of all solid wastes, are those which have particularly significant impacts on public health and the environment.

Subtitle C, then, creates a management control system which, for those wastes defined as hazardous, requires "cradle-to-grave" cognizance including appropriate monitoring, recordkeeping, and reporting throughout the system. Section 3001 defines the criteria and characteristics for identifying and listing hazardous wastes. Those wastes which are identified as hazardous by these means are included in the management control system created under Sections 3002-3006 and 3010. Those that are excluded will in any case be subject to the requirements being carried out by States under Subtitle D under which open dumping is prohibited and environmentally acceptable practices are required.

Section 3002 addresses the standards applicable to generators. The Agency does not interpret the intent of Congress to include in this category individual homeowners. Section 3002 requires the creation of a manifest system which will track wastes from the point of generation to their ultimate disposition.

Section 3003 addresses standards affecting transporters of hazardous wastes to assure that wastes are carefully managed during the transport phase. The Agency is exploring opportunities for meshing closely with proposed and current DOT regulations to avoid duplication in this area.

Section 3004 addresses standards affecting owners and operators of hazardous waste storage, treatment, and disposal facilities. These standards define the levels of environmental protection to be achieved by these facilities and provide the criteria against which EPA (or State) officials will measure applications for permits. Facilities on the generator's property, as well as off-site facilities, are covered by these regulations and will require permits. Generators and transporters who do not treat, store, or dispose of hazardous wastes do not need permits.

Section 3005 describes the scope and coverage of the actual permit-granting

process for facility owners and operators. Requirements for the permit application, as well as for the issuance, revocation process, are defined by these regulations. Section 3005(c) provides for interim permitted status during the time period in which the Agency or State is reviewing the pending permit applications.

Section 3006 requires EPA to issue guidelines for State programs and procedures by which States may seek both full and interim authorization to carry out the hazardous waste program in lieu of an EPA-administered program.

Section 3010 defines procedures by which any person generating, transporting, owning or operating a facility for storage, treatment, and disposal of hazardous waste must notify EPA of this activity within 90 days of promulgation of regulations defining any hazardous waste (section 3001). Certain States will be authorized to perform this function upon application to the Administrator. It is significant to note that no hazardous waste subject to Subtitle C regulations may be legally transported, treated, stored, or disposed, nor may interim permits be issued, unless this timely notification is given to EPA or a designated State. After this 90-day notification period, transporters will need to comply with 250.32, which requires transporters to obtain an identification code from EPA or an authorized State.

Sections 3001, 3002, 3004, and 3005 standards are expected to be proposed during the summer of 1978. The Agency intends to promulgate final regulations by the fall of 1978 for each of these sections of Subtitle C. However, it is important for the regulated communities to understand that the regulations (sections 3002-5) do not take effect until six months after promulgation. Thus, there will be a time period after final promulgation during which public understanding of the regulations can be increased and those covered by the regulations can prepare to comply. During this same period, notifications required under section 3010 and permit applications required under section 3005 can be distributed for completion by applicants.

Table I appearing below cross references the numbered sections of RCRA to the Subpart designations to be used in the regulations:

TABLE I

Solid Waste Disposal Act	
Subtitle C—Numerous System	
Subpart A—Section 3001 Standards for Criteria, Identification, and Listing of Hazardous Waste	
Subpart B—Section 3002 Standards Applicable to Generators	
Subpart C—Section 3003 Standards Applicable to Transporters	
Subpart D—Section 3004 Standards for Owners and Operators of Treatment, Storage, and Disposal Facilities	

Subpart E—Section 3005 Permits for Treatment, Storage, or Disposal
 Subpart F—Section 3006 Guidelines for Authorized State Programs
 Subpart G—Section 3010 Preliminary Notification of Hazardous Waste Activities

BACKGROUND

In developing these standards for transporters of hazardous waste, the Environmental Protection Agency has solicited comments, data, opinions, and suggestions from the regulated community (i.e., hazardous waste generators, transporters, operators of treatment and disposal facilities), States, and the public on the major issues confronting EPA as part of the regulation development process. This effort has included the publication of an Advance Notice of Proposed Rulemaking (NPR) 42 FR 22332 (May 2, 1977), a series of 13 public meetings with a total attendance of over 1,000 people, and the review of the draft regulations by representatives from the public, public interest groups, State and local governments, transporters, generators, and disposers of waste. All comments were reviewed and considered by EPA before proposing these standards for hazardous waste transportation.

Compliance with these hazardous waste transportation regulations (which include by reference most of CFR 46 and CFR 49) by no means exempts the transporter from compliance with the requirements of other Federal, State, or local regulations.

Section 3003(a) of the Act directs the Administrator to promulgate regulations establishing standards applicable to transporters of hazardous wastes "as may be necessary to protect human health and the environment." Such standards shall include but need not be limited to recordkeeping, transportation of properly labeled wastes, compliance with the manifest system, and delivery of the hazardous waste only to a permitted facility. Section 3003(b) states that in case any hazardous waste identified or listed by EPA is subject to the Hazardous Materials Transportation Act (38 Stat. 2158; 49 U.S.C. 1801 and following), the Subtitle C regulations promulgated by the Administrator shall be consistent with the Department of Transportation's (DOT) Hazardous Materials Regulations. The Administrator is authorized to make recommendations to the Secretary of Transportation concerning the regulations of hazardous waste.

The criteria for identifying and listing hazardous waste, as developed under section 3001 of the Act, will take into account toxicity, persistence, degradability in nature, potential for accumulation in tissue, flammability, corrosiveness, and other hazardous characteristics.

Hazardous wastes defined or listed under Section 3001 may include haz-

ardous materials as defined by DOT or "hazardous substances" as defined by EPA under the Federal Water Pollution Control Act. DOT has designated material as hazardous upon finding that the transportation of a material in commerce may pose an unreasonable risk to health and safety or property (49 CFR 171.8). The criteria and testing methods to evaluate whether or not a material is hazardous are found in 49 CFR 173. The following have been designated as classes of hazardous materials by the Secretary of Transportation: Explosives, Combustible Liquids, Corrosive Materials, Flammable Liquids, Flammable Gases, Non-Flammable Gases, Flammable Solids, Organic Peroxides, Oxidizers, Poisons, Irritating Materials, Etiologic Agents, and Radioactive Materials.

Regulations defining hazardous substances under Section 311 of the Federal Water Pollution Control Act are found under 40 CFR 116. The Administrator is required to designate hazardous substances that present an imminent and substantial danger to the public health or welfare when discharged in any quantity into or upon the waters of the United States.

EPA AND DOT COORDINATION

The standards set forth under section 3003 are consistent with standards developed under the Hazardous Materials Transportation Act (49 CFR 100-189).

After lengthy discussions between EPA and DOT, DOT has expressed a strong interest in broadening its Hazardous Materials Regulations to include most or all of EPA's proposed hazardous waste regulations. Depending on DOT's actions, EPA may eventually jointly promulgate with DOT, modify these proposed regulations, or adopt forthcoming DOT regulations. EPA and DOT intend to jointly enforce the DOT regulations governing transportation of hazardous waste.

COMPLIANCE WITH U.S. DOT HAZARDOUS MATERIALS REGULATIONS

According to a recent interpretation by the Office of Hazardous Materials Operations (DOT), any material, including waste, which meets the DOT criteria of a hazardous material must be handled according to DOT regulations.

The Office of Hazardous Materials newsletter of April/May 1977 states:

There have been numerous inquiries to the Office of Hazardous Materials Operations regarding the applicability of the Department's Hazardous Materials Regulations to the transportation of waste materials. These regulations are structured to apply to any materials that may pose an undue hazard in transportation and, as such, do not differentiate between waste and other than waste materials. If, after processing, a material meets the definition

of a hazardous material, then that material must be classed and shipped in accordance with the requirements prescribed for the hazard associated with the material. Many materials, including those considered waste materials, may have more than one hazard and certain other materials may lose their hazardous characteristics due to processing. A mixture of materials, both waste and other than waste, must be properly evaluated to determine its characteristics since, after processing, a mixture may become more or less hazardous than it was prior to processing.

The Department's Hazardous Materials Regulations may apply to any material regardless of its end use; the fact that material is considered a waste material does not relieve application of these (DOT) regulations.

DOT's current Hazardous Materials Transportation Regulations only apply to transporters engaged in interstate or foreign commerce and the shippers who use them. However, some intrastate shipments are regulated by States that have adopted the Federal regulations or have similar regulations. In the above cases, the shipper usually is responsible for proper description of the hazardous material, proper labeling, packaging, and placarding.

DOT regulations applicable to transporters are found in the Code of Federal Regulations, Title 49, parts 171 (General Information, Regulations, and Definitions); 174 (Carriage by Rail); 175 (Carriage by Aircraft); 176 (Carriage by Vessel); 177 (Carriage by Public Highway). Bulk shipments of hazardous materials by vessel are governed by the following DOT regulations: 46 CFR 30-40 (Tank Vessels); 54 (Marine Portable Tanks); 98 (Bulk Cargoes); 148 (Solids in Bulk); and 151 (Unmanned Barges). Each of these standards contains regulations for acceptance of materials for transportation, loading, unloading, handling, storage of hazardous materials, leaking containers, accident/spill reporting requirements, containerization, and detailed requirements for specific classes of hazardous materials.

EPA's proposed regulations require that when a material is both a hazardous waste as defined by EPA and a hazardous material as defined by DOT, the provisions of the U.S. DOT Hazardous Materials Regulations must be complied with for intrastate as well as interstate transportation.

For those hazardous wastes not currently subject to the DOT Hazardous Materials Regulations (primarily toxic materials), EPA recognizes DOT's primary mandate for the development of standards concerning the safety aspects of loading, unloading, and handling of materials in transportation. Since EPA anticipates that DOT will redefine hazardous materials to include all hazardous wastes, EPA has determined that DOT should develop such safety standards.

To the extent that problems are identified by EPA and DOT regarding additional measures needed for safety in transportation for these newly covered wastes, the two Agencies will develop appropriate revisions to the currently anticipated rulemakings. Comments are requested concerning the additional safety measures that may be needed for the safe transportation of these hazardous wastes.

SCOPE OF REGULATIONS

EPA's transportation standards do not apply to every shipment of hazardous waste. They only apply when a manifest is required under regulations to be proposed under Section 3002 of the Act. The manifest is the form used for identifying the quantity, composition, and the origin, routing, and destination of the hazardous waste. A manifest will not be required under Section 3002 for transport on the same premises where the waste is generated, treated, stored, or disposed. In such cases, the waste must be properly labeled, contained, treated, stored, or disposed.

Even though a manifest is not required for certain shipments of hazardous waste, transporters who consolidate shipments of hazardous wastes are required under Section 250.30 to deliver the shipment to a permitted facility. In addition such transporters must comply with the applicable DOT Hazardous Materials Regulations concerning shipping papers, labeling, marking, placarding and transportation (49 CFR 100-189).

IDENTIFICATION CODE

Section 250.32 of these regulations will require that every transporter of hazardous waste must furnish information to EPA or an authorized State concerning its hazardous waste transportation activity. Upon submission of this information, the transporter will be issued an identification code. The identification code will in most cases be identical to existing codes assigned to transporters by Federal or State agencies. Generators and shippers of hazardous waste will not be permitted to use transporters who do not have such code. The identification code should not be construed as either a seal of approval by EPA or the issuance of a license or permit.

RECORDKEEPING

Section 3003 of the Act requires that records be kept concerning hazardous waste transported and its origin and destination. In current transport practice, records are often kept (as required by the State public utility commissions or public service commissions and the Interstate Commerce Commission) in the form of bills of lading, waybills, or invoices. These documents

include the following information: the shipper's name and address; the transporter's name and address; the consignee; the quantity of the material; and a description of the material.

To avoid duplication, EPA has tailored its recordkeeping requirements to the existing shipping papers. The Agency requires that a record be kept indicating the origin and destination of each shipment of the waste, the date of pick-up, quantity of waste transported, a description of the waste and a certification that the waste has been transferred to another transporter or delivered to a permitted facility. In most cases, the record will be a copy of the manifest or "delivery document" with the above information. EPA uses the term delivery document to refer to all forms of shipping papers which contain the above information. The transporter is required to retain a copy of this record for a three-year period.

ACCEPTANCE OF HAZARDOUS WASTE FOR TRANSPORT

Under the Hazardous Materials Regulations, a transporter cannot accept a hazardous material for transport unless it is properly described, labeled, packaged, and placarded. EPA has developed similar shipping and acceptance regulations for hazardous wastes. Under regulations to be proposed under section 3002 of the Act, the generator is required to certify that the hazardous waste is properly prepared for transportation.

As a service to the generator, the transporter may prepare a manifest (the generator must sign the certification), label, and package the hazardous waste. However, since the generator is responsible for these functions under Section 3002 of the Act, the generator may arrange with the transporter to privately indemnify the generator against financial loss due to improper performance.

LOADING AND STOWAGE FOR TRANSPORTATION

For substances which are both hazardous materials under DOT regulations and hazardous wastes under EPA regulations, EPA in Section 250.34 has adopted DOT regulations regarding loading and stowage. These regulations will apply to interstate as well as to intrastate transportation.

Mixing of wastes which results in the generation of gases, explosion, or fire is prohibited by DOT regulations (which are adopted by reference in Section 250.34). If other hazardous wastes from different generators or separate wastes from the same generator are mixed, and the manifest no longer identifies the composition of the waste shipment, the transporter will be considered a generator, and therefore required to comply with the

standards for generators as contained in Subpart B.

COMPLIANCE WITH THE MANIFEST

The manifest system developed under Section 3002 of the Act is intended to track the movement of the hazardous waste from the generator to the ultimate disposal site. A manifest need not accompany the shipment of hazardous waste if information contained on the manifest accompanies it in another form, e.g., a bill of lading or hazardous material shipping paper. Signatures on the manifest or delivery document will certify the transfer of the hazardous waste from the generator to the transporter(s), and finally, acceptance by the hazardous waste management facility.

If the transporter of the waste transfers it to another transporter using a different mode of transportation, with respect to air and highway, between different transporters using the same mode, the manifest or the delivery document will require the signature of each transporter.

Upon delivery, one copy of the signed manifest or delivery document is retained by the transporter; another copy is forwarded by the hazardous waste management facility to the generator.

DELIVERY OF HAZARDOUS WASTES

The transporter must deliver all hazardous waste to a permitted hazardous waste management facility designated by the generator. If the transporter removes the hazardous waste from the transport vehicle and stores, consolidates or mixes it with another waste, the transporter will be required to comply with standards developed under Sections 3002 and 3004 and receive a permit for the facility from EPA or an authorized State.

Prior to acceptance of the hazardous waste, the transporter should contact the facility designated by the generator to determine its operating hours. Deliveries of hazardous waste to facilities after operating hours should be avoided.

If, for any reason the waste management facility cannot accept the hazardous waste, the transporter should ask the generator whether the hazardous waste shipment should be returned or delivered to an alternative facility. (Under Section 3002 of the Act, EPA intends to allow the generator of the hazardous waste to specify in advance alternative facilities on the manifest.) The transporter should provide advance notice to the alternate facility prior to taking the waste shipment there.

SPILLS

These regulations provide for the expeditious handling of a spill of a haz-

ardous waste or a hazardous material (which, when spilled, becomes a waste). When a spill requires immediate removal (as determined by EPA, other Federal Agencies, or a State or local authorized official), due to a threat of imminent hazard to human health or the environment, EPA's standards concerning identification codes for transporters, recordkeeping, acceptance of the hazardous wastes, compliance with the manifest, delivery to the designated facility, and placarding and marking of vehicles will be suspended until the spill is cleaned up, rendered non-hazardous, or determined to no longer present an imminent hazard to human health or the environment (as determined by EPA, other Federal Agencies, or a State or local authorized official). When a spill occurs, these proposed standards require the transporter to: (a) telephone the National Response Center (NRC); (b) file a written report on the spill to the DOT using the DOT Hazardous Materials Incident Report; and (c) clean up the spill, or take such action as may be required by Federal, State, or local agencies so that the waste no longer presents a hazard to human health or the environment.

EPA is proposing the use of the existing 24-hour emergency NRC phone number for telephone calls relating to hazardous waste spills. Once the NRC is notified, the appropriate Federal and State agencies will be contacted. (Transporters may also be subject to State telephone notification requirements in the event of a spill.) Every spillage of a hazardous waste during transportation regardless of quantity will require a telephone contact to the NRC.

EPA has adopted 49 CFR 171.18 to govern the written reporting of hazardous waste spills. Rule 49 CFR 171.16 requires a transporter of hazardous materials to report in writing within 15 days to the U.S. Department of Transportation each incident (including spills) that occurs during the course of loading, transport, or unloading.

Spill reports are important to allow EPA to evaluate current regulations concerning the handling and packaging of hazardous wastes and monitoring of environmental damage. In fulfilling out the DOT Hazardous Materials Incident Report, the transporter should indicate if the spilled hazardous waste entered a water body, public drinking water supply or ground waters, destroyed vegetation or wildlife, or produced any other harmful effects on the environment. The transporter should also estimate the total quantity of the material removed from the spill site and describe its final disposition. If it was delivered to a permitted hazardous waste management facility, the permit number should be

included. If any residual remains, the quantity should be estimated and the transporter should describe any actions taken to reduce the hazardousness of the waste, including actions required by Federal, State, or local agencies.

MARKING OF VEHICLES

The ICC and DOT currently require motor vehicles involved in the interstate transport of hazardous materials to be marked with the name and hazard of the material. EPA has adopted this requirement for all hazardous waste transporters whose vehicles require DOT placarding or carry more than 1,000 pounds of hazardous waste. If there is an emergency and the manifest or delivery document is not available, such marking enables the public or emergency response personnel to contact the transporter's home office to determine the contents of the shipment.

PLACARDING OF VEHICLES

For hazardous wastes which meet DOT's definition of a hazardous material, EPA has adopted existing DOT placarding requirements. Vehicles containing certain hazardous wastes which are toxic, bioaccumulative, carcinogenic or may cause genetic change are not now required to be placarded by DOT. EPA is considering recommending to DOT the development of a new placard for such substances. Comments on the need for such a placard are requested.

PERMITTING TRANSPORTERS

Several States, public interest groups, waste management representatives, and transporters recommended that a permitting system for transporters of hazardous wastes be developed by EPA. Such a permitting system would serve two purposes: to identify and collect data on hazardous waste transporters, and to enable the permitting agency to revoke the permit in the event of misconduct.

After reviewing the legislative history of the Solid Waste Disposal Act, EPA has found no Congressional intent to authorize it to require a permit system for transporters. Although section 3003 generally calls for promulgating "regulations establishing such standards applicable to transporters of hazardous waste identified or listed under this subtitle, as may be necessary to protect human health and the environment." Section 3005, which sets out the permit requirements, is directed only toward owners and operators of facilities for the treatment, storage, or disposal of hazardous waste, and not toward transporters. Moreover, the States and the Interstate Commerce Commission currently regulate (often by permit)

many transporters of hazardous wastes directly. Therefore, at this time, EPA will not develop an EPA transporter permitting program.

REFERENCES TO SECTION 3002 STANDARDS

In the following proposed standards, references are made to the standards being developed for a manifest system and for labeling practices under section 3002.

Section 250.22 describes standards for the manifest system. The manifest is designed to provide information on the movement of hazardous waste from the point of generation to the designated permitted hazardous waste management facility. To be consistent with DOT requirements for hazardous materials, EPA requirements are similar to the DOT shipping paper requirements. The manifest is envisioned as a shipping document that does not leave commercial channels and takes the basic form of the standard Bill of Lading.

Section 250.26 describes standards for labeling containers of hazardous wastes. Any hazardous waste which is also a DOT hazardous material must be labeled and marked in accordance with the DOT regulations. In addition to the DOT requirements, EPA is considering a marking that will identify the generator and (for individual packages) the manifest number for the shipment of hazardous waste.

A reporting impact analysis is being performed for the substantive environmental regulations to be published under RCRA Subtitle C, Hazardous Waste Management in conjunction with a data processing system feasibility study. These proposed standards will require the transporter, in the event of a spill of hazardous waste, to telephone the NRC and submit a written report to DOT. The written report uses the existing DOT Hazardous Materials Incident Report with supplemental information required. It is anticipated that cost for compliance is minimal. The cost of the report preparation (clerical and management) and phone notification is estimated to be no more than \$100 per year per vehicle involved in a spill of hazardous waste.

ECONOMIC AND ENVIRONMENTAL IMPACTS

In accordance with Executive Order 12044 and 11821 as amended by Executive Order 11949, and OMB Circular A-107 and EPA policy as stipulated in 39 FR 37419, October 21, 1974 respectively, analyses of the economic and environmental impacts are being performed for the entirety of Subtitle C, Hazardous Waste Management, and are not completed as yet. However, a separate report on the cost of compliance with section 3003 proposed standards has been prepared. It is anticipated

that the cost of compliance is minimal due to the extent of existing ICC, DOT, and State regulations; and the nature of the transport activity, which includes significant loading and unloading times, during which manifest compliance activities can usually be accomplished.

The Draft EIS will be released for public comment 30 days after the last Subtitle C regulation is proposed. Copies of the EIS and the economic analysis will be available for review through the Office of Solid Waste.

Dated: April 21, 1978.

BARBARA BLUM,
Acting Administrator.

Title 40, Code of Federal Regulations, Part 250 would be amended, by adding a Subpart C consisting of §§ 250.30-250.38 as follows:

PART 250—HAZARDOUS WASTE GUIDELINES AND REGULATIONS

Subparts A—E (Reserved)

Subpart C—Standards Applicable to Transporters of Hazardous Wastes

- Sec. 250.30 Scope.
- 250.31 Definitions.
- 250.32 Identification code.
- 250.33 Recordkeeping.
- 250.34 Acceptance and transport of hazardous waste.
- 250.35 Compliance with the manifest.
- 250.36 Delivery of hazardous wastes to a designated permitted facility.
- 250.37 Spills.
- 250.38 Placarding/markings of vehicles.

Subparts D—E (Reserved)

Subpart G—(Reserved)

AUTHORITY: Secs. 3002(a) and 3003, Pub. L. 94-580, 90 Stat. 2804, 2807 (42 U.S.C. 8912, 8923).

§ 250.30 Scope.

(a) These regulations establish standards which apply to any person or Federal agency that transports hazardous waste within the United States which requires a manifest as specified under subpart B of this part or any transporter importing a shipment of hazardous waste from abroad. If a manifest is not required, any person or Federal agency that consolidates for shipment and transports hazardous waste shall deliver the entire quantity of hazardous waste(s) to a facility permitted under subpart E of this part and shall comply with the DOT regulations listed in 250.30(c).

(b) These regulations do not apply to persons or Federal agencies that transport hazardous waste(s) on the site of a hazardous waste generator or permitted hazardous waste management facility.

(c) If hazardous waste identified or listed under subpart A of this part also

meets the definition and criteria for hazardous materials of the Department of Transportation (49 CFR 171.8 and 173), the following regulations of the Department of Transportation will apply for both intrastate and interstate transportation: 49 CFR 171, General Information, Regulations, and Definitions; 49 CFR 174, Carriage by Rail; 49 CFR 175, Carriage by Aircraft; 49 CFR 176, Carriage by Vessel; 49 CFR 177, Carriage by Public Highway; 49 CFR 30-40, Tank Vessels; 46 CFR 64, Marine Portable Tanks; 46 CFR 96, Bulk Cargo; 46 CFR 148, Solids in Bulk; and 46 CFR 151, Unmanned Barges.

§ 250.31 Definitions.

For purposes of this part, all terms not herein defined shall take the meaning given them by the Solid Waste Disposal Act, Pub. L. 94-580.

(a) "Delivery document" means a shipping paper (bill of lading, waybill, dangerous cargo manifest, or other shipping document) used in lieu of the original manifest to fulfill the recordkeeping requirement of § 250.33.

(b) "Generator" means any person defined as a generator in regulations under subpart B of this part.

(c) "Hazardous material" means a substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated under 49 CFR 171.3 and 173.

(d) "Identification code" means the unique code assigned to each transporter of hazardous waste by EPA or an authorized State upon notification in accordance with subpart G of this part or upon compliance with § 250.32 of this subpart.

(e) "Manifest" means the form used for identifying the quantity, composition, and the origin, routing and destination of hazardous waste as specified in regulations under § 250.22, subpart B of this part.

(f) "Mode" means any of the following transportation methods: Rail, highway, air, or water.

(g) "Motor vehicle" means a vehicle, machine, tractor, trailer, or semitrailer, or any combination thereof, propelled or drawn by mechanical power and used upon the highways in transportation. It does not include a vehicle, locomotive, or car operated exclusively on a rail or road.

(h) "On the site" means on the same or geographically contiguous property. Two or more pieces of property which are geographically contiguous and are divided only by public or private rights-of-way are considered a single site.

(i) "Permitted hazardous waste management facility" (or "permitted facility") means a hazardous waste treat-

ment, storage, or disposal facility that has received an EPA permit in accordance with the requirements of subpart B of this part or a permit from an authorized State agency.

(j) "Spill" means any accidental discharge of a hazardous waste onto or into the land or water.

(k) "Transporter" means a person or Federal agency engaged in the transportation of hazardous waste by air, rail, highway, or water.

(l) "Transport vehicle" means a motor vehicle, rail freight car, freight container, cargo tank, portable tank, or vessel (as defined in 49 CFR 171.3) used for the transportation of hazardous waste.

(m) "United States" means the 50 States, District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

§ 250.32 Identification code.

Any transporter who transports or intends to transport hazardous waste within the United States shall comply with §§ 250.322 and 250.323 to obtain an identification code from the Environmental Protection Agency or an authorized State. The identification code issued shall be included on:

- (a) The manifest (§ 250.322);
- (b) The hazardous materials incident report (§ 250.37); and
- (c) The delivery document (§ 250.35(c)).

§ 250.33 Recordkeeping.

Each transporter shall maintain a copy of the manifest or delivery document for a period of not less than 3 years from date of either transfer of the hazardous waste to another transporter or delivery of the hazardous waste to a permitted facility as indicated on the manifest or the delivery document.

§ 250.34 Acceptance and transport of hazardous waste.

(a) A transporter shall not accept from a generator a shipment of hazardous waste without a manifest signed by the generator in accordance with the provisions of § 250.32.

(b) A transporter shall not transport a shipment of hazardous waste from a generator without signing the manifest acknowledging acceptance of the hazardous waste shipment.

(c) If a shipment of hazardous waste is transported by more than one transporter, subsequent transporters shall not accept for transport or transport the hazardous waste shipment without a manifest or shipping document that contains the information on the manifest in accordance with the provisions of § 250.32.

(d) A transporter shall not transport a shipment of hazardous waste in con-

tainers not properly labeled or marked in accordance with the provisions of § 250.36.

(1) If the DOT label is lost or replaced, the transporter must replace that DOT label in accordance with the provisions of § 250.36.

(2) The DOT replacement label must be based on the information taken from the manifest covering the shipment.

(e) A transporter shall not transport containers which are leaking or appear to be damaged. In the event that leakage or spill is discovered during transportation and the leakage results in a spill, the transporter shall comply with 250.37.

(f) A transporter shall not accept or consolidate hazardous waste(s) consisting of a material or mixture of materials that is prohibited from transportation by 49 CFR 173.21.

§ 250.35 Compliance with the manifest.

(a) Each transporter shall assure that a copy of the manifest or the information contained on the manifest (in the form of, e.g., a hazardous materials shipping paper, bill of lading, waybill) at all times accompanies the shipment of hazardous waste.

(b) If the hazardous waste shipment is transferred between the different modes (air, rail, highway, or water) or between different transporters using the air or highway mode, each transporter and each subsequent transporter shall sign the manifest or delivery document acknowledging acceptance of the shipment before the hazardous waste can be transported.

(c) The delivery document shall:

- (1) Contain as a minimum, the following information:
- (i) Name, address of transporter;
- (ii) Name, address, identification code of generator;
- (iii) Name, address, identification code of designated permitted facility;
- (iv) Corresponding manifest document number; and
- (v) Description and quantity of hazardous waste.

(2) Only be used when the original manifest is not with the shipment of hazardous waste.

(d) The transporter shall, upon delivery of the hazardous waste to the designated permitted facility, obtain the signature of an authorized agent of the permitted facility on the manifest or delivery document certifying delivery.

(1) If a delivery document is used in lieu of the manifest, the transporter shall issue three copies of the delivery document to the designated permitted facility for signature. The transporter shall retain one of the signed copies as required by 250.33.

(2) If the transporter cannot acquire immediate certification, the transporter shall:

(i) Indicate on the manifest or delivery document the following:

- (A) Time and date of delivery; and
- (B) Reason manifest or delivery document could not be certified upon delivery; and

(ii) Acquire certification on the manifest or delivery document by an authorized agent of the permitted facility as soon as possible, but not to exceed 5 working days after delivery of the shipment.

§ 250.36 Delivery of hazardous waste to a designated permitted facility.

(a) The transporter shall deliver the entire quantity of hazardous waste(s) accepted from a generator or a transporter to a permitted facility designated by the generator on the manifest.

(b) If the transporter removes the hazardous waste from a transport vehicle or aircraft for purposes of blending, mixing, treating, or storing, the blending, mixing, treating, or storing shall be done at a permitted facility.

(c) If hazardous wastes from different generators or separate wastes from the same generator becomes mixed after having been accepted by the transporter, the transporter shall comply with the generator standards under subpart B of this part unless the transporter can demonstrate that the information designated on the manifest(s) under § 250.32 (a) (5), (6) of subpart B of this part still identifies the hazardous waste.

§ 250.37 Spills.

(a) If a spill of hazardous waste requires immediate removal to protect human health or the environment (as determined by EPA, other Federal agencies, or a State or local authorized official), the requirements of this section shall apply in lieu of §§ 250.32, 250.33, 250.34, 250.35, 250.36, and 250.38 of this subpart until the spilled hazardous waste no longer presents an immediate hazard to human health or the environment (as determined by EPA, other Federal agencies, or a State or local authorized official).

(b) In the event of any spill of hazardous waste during transportation, the transporter shall:

- (1) The National Response Center, U.S. Coast Guard, toll free, 800-424-8802; or
- (2) The government official pre-designated in the applicable regional contingency plan pursuant to 40 CFR 1510 as the on-scene coordinator for the geographic area in which the incident occurs.

(2) Furnish the following information upon notification:

- (i) Name of person reporting the spill;
- (ii) Name and address of transporter;
- (iii) Name and address of generator;
- (iv) Phone number where reporter can be contacted;

(v) Date, time, and location of incident, (indicate pollution of land, water, air, or public water supply, if known);

(vi) Type of transport vehicle and mode;

(vii) Type of incident (e.g., fire, breakage, spillage);

(viii) Classification, name, and quantity of hazardous waste involved, to the extent available; and

(ix) The extent of injuries, if any.

(3) File within 15 days a written report in duplicate with the Director, Office of Hazardous Materials Operations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590, on each spill that occurred during the course of transportation. DOT form F 5800.1¹ shall be utilized as a basic reporting document; item A 1.5 shall be filled in

as "waste"; item B4 shall include the transporter's identification code. In addition under part H of DOT form 5800.1, the following information shall be included:

(i) If known, location of spill in relation to surface waters, public water supply, groundwater, wildlife habitats, and agricultural production areas;

(ii) Quantity of material removed and disposition of the material; and

(iii) Disposition and quantity of unremoved material.

(c) The transporter shall clean up all the spilled hazardous waste or take such action as may be required by Federal, State, or local agencies so that the spilled hazardous waste no longer presents a hazard to human health or the environment.

§ 250.38 Placarding/markings of vehicles.

(a) A transporter shall not move a transport vehicle containing hazardous waste which is also a DOT hazardous material unless it is placarded in accordance with 49 CFR 172, subpart F. This prohibition applies to both intrastate and interstate transportation.

(b) A transporter shall mark each motor vehicle being operated under its own power for the transportation of hazardous waste if the motor vehicle is required to be placarded or if the motor vehicle contains greater than 1,000 pounds of hazardous waste. The marking shall display the following information:

(1) Name of transporter under whose authority the vehicle is being operated; and

(2) The city or community in which the carrier maintains its principal office or in which the vehicle is customarily based.

(i) The marking must:

(A) Appear on both sides of the vehicle;

(B) Be in letters that contrast sharply in color with the background; and

(C) Be readily legible during daylight hours from a distance of 50 feet while the vehicle is stationary.

(ii) The marking may consist of a removable device meeting the above identification requirements.

[FR Doc. 78-11698 Filed 4-27-78; 8:45 am]

¹ DOT form F 5800.1 is filed as part of the original document and available from the Office of Hazardous Materials Operations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590.

APPENDIX 8
ENVIRONMENTAL PROTECTION AGENCY - REGION IX

OIL DISCHARGE REPORT

DISCHARGE DATA

Location: _____
Date: _____ Time: _____
Source: _____
Cause: _____
Body of Water: _____
Type of Material: _____
Quantity reaching body of water: _____
Check: film sheen emulsion on near surface of the water
Describe flow path from source to water body: _____

FACILITY DATA

Name of facility: _____
Address of facility: _____
Type of facility: _____
Name of person in charge: _____
Name of owner/operator: _____
Address of owner/operator: _____

REPORTING DATA

Name or person reporting discharge: _____
Did discharger report discharge to: EPA __ USCG __
If so, date: _____ time: _____

OIL/HAZARDOUS SUBSTANCE DISCHARGE REPORT

1. DATE _____ TIME _____ DUTY OFFICER _____ NUMBER _____
2. PERSON REPORTING/TITLE _____
ORGANIZATION _____
ADDRESS _____
TELEPHONE _____
3. LOCATION (NEAREST CITY (OR COUNTY); STATE; SPECIFIC LOCATION)

4. TIME/DATE OF INCIDENT _____
5. BODY OF WATER AFFECTED _____
6. SOURCE (FACILITY: NAME; ADDRESS; TYPE; OWNER) (VESSEL:
NAME; FLAG; CALL SIGN; TYPE; OWNER/AGENT) _____

7. CAUSE/OPERATION IN PROGRESS _____

8. MATERIAL _____
9. QUANTITY DISCHARGED _____
10. QUANTITY IN WATER/SLICK SIZE AND COLOR _____
11. ON SCENE WX: _____ WIND _____ SEAS/CURRENT _____
SLICK MOVEMENT (SPEED AND DIRECTION) _____
12. ACTIONS TAKEN (SECURING/CONTAINMENT/REMOVAL) _____

13. OTHER AGENCIES NOTIFIED _____
14. ORIGINAL REPORTING PARTY (IF OTHER THAN CALLER) _____

15. ADDITIONAL INFORMATION _____

16. DUTY OFFICER'S ACTIONS _____

PHOTOGRAPHS

Were photographs taken? yes__ no__

If yes, name of photographer:_____ date:_____ time:_____

As appropriate, name of witness(s):_____

SAMPLES

Were samples taken? yes__ no__

If yes, name of sampler:_____ date:_____ time:_____

Location of samples:_____

Custody sheet? yes__ no__

ADDITIONAL COMMENTS

REPORT PREPARED BY:

Name:_____ phone:_____ date:_____ time:_____

Bureau of Land Management
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